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Abstract

A study was conducted to determine the effect of a taped, guided listening program of contemporary music on students' understanding of other styles of music. Of the 720 students selected for the study from San Francisco junior high schools, 226 were placed in an experimental group which received 18 one-half hour taped listening lessons of 20th-century art music, 132 received Leonard Bernstein's taped listening lessons, which did not include contemporary music, 201 were placed in general music classes and did not receive a listening experience, and 161 served as a zero control group which was not exposed to musical instruction and which provided a baseline for assessing students' aesthetic judgments. The Kyme Test of Aesthetic Judgments in Music was administered before and after the 9 weeks of instruction. Analysis of Covariance was made of the data. Results indicated that (1) knowledge gained through the study of contemporary music was not transferred to music of the past, and (2) the 20th-century art music program had greatest success in inner-city "deprived" schools. (Author/MP)

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EFFECTS OF A LISTENING PROGRAM IN CONTEMPORARY MUSIC UPON THE APPRECIATION BY JUNIOR HIGH SCHOOL STUDENTS OF REPRESENTATIVE LITERATURE OF OTHER PERIODS

by

Karen Lee Fanta Zumbrunn

University of California

Berkeley, California

September 1968

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The important contribution of my husband John, by his patience, assistance, and understanding cannot be fully expressed.

To John, Mimi, Dad

CHAPTER I - INTRODUCTION

Statement of the Problem

The purpose of this research was to study the effects of a taped, guided listening program in twentieth century art music upon the understanding by junior high school students of other styles of music. Specifically, it was postulated that junior high school students receiving guided, analytical listening in twentieth century art music would show a greater understanding of representative works from the seventeenth, eighteenth, and nineteenth centuries, as measured on a test of aesthetic judgments in music than students receiving other listening instruction, other music instruction, or a zero control group not exposed to music instruction.

Hypothesis to be Tested

It was hypothesized that there would be no significant differences among the four treatment groups, namely, (1) the experimental group which would receive guided, taped listening lessons to twentieth century art music, (2) the control group which would receive Leonard Bernstein taped listening lessons, exclusive of twentieth century art music, (3) the control group consisting of general music classes which would not receive a guided listening experience, and (4) the zero control group which would not be exposed to musical instruction.

Background and Need for the Study

The idea of guiding music listening arrived with the changing and expanding music public of the eighteenth century. Since that time, instruction in music appreciation has been justified in part on the basis of the public's desire for it. Musicians and teachers also felt a need to provide guidance in listening. Music appreciation, in the form of listening experiences, appeared in the school music curriculum during the first two decades of the twentieth century. During the 1920's, music supervisors designed highly structured courses in music appreciation for teaching by elementary classroom teachers. These curricula attempted to build a listening repertoire for children through the study of "suitable" compositions.

By the 1930's, a growing distrust of music appreciation as it had been taught resulted in its decline as a curricular subject. Many teachers felt there had been an excessive emphasis upon intellectualization of the listening experience. Thus, there was a growing tendency to consider music listening as primarily a means of enjoyment.

Until almost 1950, music appreciation in the schools existed primarily as a subject to be related to other musical and non-musical areas. Since the late 1950's and early 1960's, however, there has been renewed interest in providing significant listening activities for all students. There is a continuing and growing awareness of the importance of listening to music with discrimination and understanding.

"Too often music is viewed as something less than a fine art," wrote James Jarrett in the Music Educators Journal, "In calling music . . . a fine art, we distinguish it as an aesthetic art from (a) practical arts like driving a car or writing shorthand, from (b) merely entertaining arts like juggling and tight rope walking, from (c) athletic arts like basketball and squash, and from (d) minor aesthetic arts like cake decorating and cosmetics."[1] One conclusion of the 1968 Music Educators National Conference biennial convention of 1968 was the reaffirmation of the need to teach music as a fine art, not as something peripheral to the curriculum.

Music education today aims at developing a "knowledgeable" audience. "While liking or disliking a piece of music is the prerogative of the student, his decision should be based on knowledge of the music. . . . Music education thus should help students base their musical choices on defensible values."[2] Listening must be regarded as another learning activity, not as a means of relaxation and recreation after the rigors of other studies.

The Yale Seminar on Music Education stated:

> Of the three main components of the curriculum, composing, performing, and listening, perhaps the most difficult one for the teachers to guide is listening. . . . Defenders of a listening program acknowledge that so far it seems to have had little success below the college level, but they attribute this to a lack of proper classroom guidance, due in turn to insufficient knowledge and skill on the part of the teachers.[3]

One of the primary objectives of the junior high school music program should be to provide opportunities for students to become discerning listeners. The vast majority of students will be primarily consumers, music listeners, for the rest of their lives. When one compares the number of students who are potential music consumers with those who are potential producers, and then compares the relative amount of curriculum time spent in the teaching of consumers and producers, the result appears to be in an illogically inverse proportion. The recently published Yale Seminar Report concluded that listening programs were a desirable part of the total music program.

> Guided listening as a means to understanding and acquaintance with the monuments of music literature, past and present, deserves a larger place than it occupies today in the elementary and secondary schools.[4]

Recent studies, such as those by Robert Cowell[5] and James Weigand[6] have indicated the need for research and experimentation in listening curricula. The authorities appear to agree that the development of intelligent music listening skills is an essential for the musical growth of the child.

A major task of the teacher of general music at the junior high school level lies in the selection of suitable music which is generic within the total range of music. The common justification for the use of twentieth century art music in the public schools is that if it does not receive a hearing, the fountain will run dry. A few teachers of good conscience have included twentieth century music because they feel that present composers must be encouraged. For this study, the welfare of the composer was not the paramount consideration. If twentieth century art music has value as a vehicle for the understanding of the wealth of music literature, it is because of inherent values in the music itself which may give insight into the structure of music as a whole.

"The primary aim of music education from kindergarten through the twelfth grade," the Yale Seminar on Music Education observed, is "the development of musicality."[7] Musicality is defined as the capacity to express a musical idea accurately through pitch and time, or, conversely, as we shall use the term in this experiment, musicality is the capacity to grasp in its completeness and detail a musical statement when heard. "Musicality may be developed through vocal and instrumental performance; bodily movement; vocal and instrumental creation, both improvised and written; and by attentive listening and ear training."[8] Two questions are crucial to this research and to the teacher of music appreciation in the public schools:

> (1) Will directed listening to one kind of music, i.e., twentieth century art music, presented to junior high school students, facilitate their understanding of other music, e.g., nineteenth century music?
>
> (2) Will there be significant growth in musicality due to transfer of training which will be reflected by the ability to make aesthetic judgments concerning music of other periods?

Frequently in the study of masterworks and music history in the junior high school, the approach is historical, starting with the Greeks, and including twentieth century music if time allows. The motivation for this approach is assumed to be logical--it is an intellectual avenue.

An opposing plan is to start with the interest of the child in twentieth century music, and generalize from a study of this medium to bring understanding of other music. This is the approach used in this experiment. If the essence of music appreciation lies in the ability to apprehend the elements of music, then the teaching of contemporary music at this level is appropriate, for it may facilitate musical understanding and render the ability to transfer from this experience to other experiences. The study of twentieth century art music becomes justifiable if students learn the structure of music and can apply these skills to non-contemporary music. If students have been taught the basic elements of aesthetic criteria in judging music, be it twentieth century, folk, seventeenth century, etc., they will have at least some basis for discrimination in their musical tastes.

Adolescents are very aware of modern sounds through the use of television and greet them with the interest of an old friend. Twentieth century music is closer to their experience than, for example, the stately minuet. It is more suited to the emotional and social needs of adolescence, and, in this respect, the teaching of "classical" music will always be, to some degree, futile. Archibeque[9] found in her study that seventh grade students preferred contemporary music to music of earlier periods.

Mursell[10] in *Education for Musical Growth* said that things are learned fast and fastest when they are related to the learner's experience, learned in a social situation, and grasped by one who has the eagerness or motivation to learn. This is not to indicate that teachers should feed the students what they want and make no attempt to raise their level of taste. Rather, since contemporary sounds are a part of their daily life, they cannot be ignored.

Bauman[11] in his study of teen-age preferences suggests the possibility of music readiness. Social and physical maturation implies that some music may be more appropriate at one time than at another--perhaps Bartok and Stravinsky might be more suitably presented than Haydn and Mozart or folk music at a given age level. An interesting study by Gatewood[12] suggests that the comprehension of different instrumental qualities is a function of maturation. She presents evidence that the sound of wind instruments is more enjoyable to youths of junior high school age. The composition of orchestras for twentieth century compositions may therefore be very important for a listening program in the junior high school.

Research, notably by Gilliland and Moore,[13] points out that rhythm and melody are the most outstanding sources of enjoyment. Gatewood[14] also found that it is the rhythm which first attracts the listener's spontaneous attention. Other musical values gradually unfold upon repeated hearings of the selection. For a study proposing to use contemporary music with its strong rhythmic appeal as a medium to facilitate the understanding of other musical works, this is highly significant. A study by Getz[15] suggests that seventh graders prefer music that has a fast tempo, a variety of volume, melodic repetitions, flowing rhythm, jumpy melody, and a variety of melody and mode. It is possible that for the average seventh grader in a general music class, twentieth century music may have more motivational appeal, making for greater recognition of musical elements.

A *directed* listening program with commentary written and taped along with the recorded examples seems needed. Research by Keston,[16] Weigand,[17] Daniels,[18] Beale,[19] Cowell,[20] and Hornyak[21] support this idea. Hare[22] suggests that biographical and historical comments may give momentum to the mediate interest of the untrained person.

Reactions to twentieth century music are particularly worth studying in light of increasing interest in using contemporary serious music in the public schools in recent years. Some educators have argued that music which seems strange, dissonant, and appalling to older persons, even to those who are musically literate, is accepted readily by secondary school age youngsters. However, no substantial evidence has been collected on the possibilities of studying twentieth century music as a means of understanding music as a genre. It was toward this end that this research proposed to direct its energies.

FOOTNOTES

1. James L. Jarrett, "Music as a Fine Art," *Music Educators Journal* (June/July 1961), 27-28.

2. M.E.N.C. "Tanglewood Symposium," *Music Educators Journal* (Nov. 1967), 57.

3. Claude V. Palisca, *Seminar on Music Education*, Cooperative Research Project No. G-013, Yale Univ., New Haven, Conn., 1963, 16.
   The research reported herein was supported by the Cooperative Research Program of the Office of Education, United States Department of Health, Education and Welfare.

4. *Ibid*., 53.

5. Robert Cowell, "The Theory of Expectation Applied to Music Listening," *Council for Research in Music Ed*., Bull. no. 5 (Spring 1965), 17-24.

6. James J. Weigand, "A Comparison of the Effectiveness of Two Methods of Teaching General Music in the Junior High School," *Emporia State Res. Stud*., X, no. 3 (March 1962), 5-55.

7. Palisca, *op*. *cit*., 6.

8. *Ibid*.

9. Charlene Paullin Archibeque, "Developing a Taste for Contemporary Music," *J. Res. Music Ed*., XIV, no. 2 (Summer 1966), 142-147.

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12. Esther L. Gatewood, "An Experimental Study of the Nature of Musical Enjoyment," *The Effects of Music*, Max Schoen, ed. (New York: Harcourt, Brace and Co., 1927), ch. 5.

13. A. R. Gilliland and H. T. Moore, "The Immediate and Long Time Effects of Classical and Popular Phonograph Selections," *J. App. Psych*., VIII (1924), 309-323.

14. *Op*. *cit*.

15. Russell Paul Getz, "The Influence of Familiarity Through Repetition on Determining Optimum Response of Seventh Grade Children to Certain Types of Serious Music," (unpublished Doctoral Dissertation, Penn. State Univ., 1963), *Dissertation Abstracts*: XXIV, 5450.

16. Morton J. Keston, "An Experimental Evaluation of the Efficacy of Two Methods of Teaching Music Appreciation," J. Exper. Ed., XXII (1953), 214-226.

17. Op. cit.

18. Ethel H. Daniels, "An Investigation on the Effects of Exposure to Contemporary Music on the Interests and Attitudes of Ninth Grade Students" (unpublished Master's Thesis, Texas Southern Univ., 1961), in Abstracts of Competent Research in Music Education: 1930-1962, Henry Cady and Erwin Schneider, eds. (Columbus, Ohio: The Ohio State Univ., 1966), 383.

19. L. Beale, "On the Aesthetics of Listening" (unpublished Doctoral Dissertation, American Univ., 1958), Dissertation Abstracts, XIX, 3, 469.

20. Op. cit.

21. R. Robert Hornyak, "An Analysis of Student Attitudes Towards Contemporary American Music," Council for Research in Music Ed., Bull. no. 8 (Fall 1966), 1-14.

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CHAPTER II - RELATED RESEARCH

Introduction

Research in the field of music listening and appreciation has been conducted with enthusiasm over the past fifty years. Of the major reviews of the literature in this area, three compilations, covering the period up to the 1930's, are commonly available. In his most exhaustive treatment, The Effects of Music,[1] Max Schoen designed and conducted fundamental research as well as compiling the studies of others. Kate Hevner surveyed the literature up to 1934 in "Appreciation of Music and Tests for the Appreciation of Music."[2] The research through the year 1936 is summarized in James Mursell's The Psychology of Music.[3] In this chapter the writer draws on both such early and more recent literature in order to offer a broader perspective of the relevant research in the field. Although some of the investigations may appear to overlap or express contradictory conclusions, they are included for completeness.

For organizational purposes the research cited in this chapter has been placed into several broad categories: (1) Types of Listeners, (2) Effects of Repetition, (3) The Influence of Age, Sex, Socio-Economic Background and Other Factors on the Appreciation and Preference of Music, (4) The Nature of Enjoyment and the Sources of Pleasure in Music, (5) The Radio and Music Listening, (6) Research in Jazz, and (7) Further Implications of Research for the Listening Program.

Types of Listeners

That there are different types of listeners or hearers of music has been pointed out by research in music appreciation. These have been categorized in various ways by different researchers. Myers[4] studied fifteen subjects with different amounts of musical background trained in introspection. He consequently defined four types of listeners: (1) the intrasubjective type for whom the music held appeal because of its sensory, emotional, or conative implications; (2) the associative type, for whom the music appealed because of the associations it awakened; (3) the objective listener, who found appeal in the music as a result of its functional value, and (4) the character type to whom the music appealed because of the character "personified as a subject" which the music suggested. For the "character attitude" to have aesthetic value, it must also arouse, and be in agreement with the intrasubjective attitude. Myers found that the objective attitude towards music occurred most frequently among the highly trained or professional musicians who repress associations and listen to music "for its own meaning." In the unmusical or least musical, associations were absent. Myers found the intrasubjective type to be the most musical, although his typology of listeners was not pure; i.e., frequently several types were present in the same listener.

Robertson[5] defines three types of responses to music: (1) the emotional state and mood of the subject is directly aroused by the qualities in the music; (2) the subject interprets the music according to the subject's own emotional attitude at the time of the hearing; (3) the subject appears to recognize the music as possessing or expressing qualities suggestive of certain emotions in the abstract. She further states that no subject ever listens exclusively in one attitude. Even the purely contemplative listener does not always succeed in keeping this level, for true listening involves a certain amount of mental effort which the listener may be incapable or undesirous of exerting.

Jancke[6] found two types of listeners: the rational, which is based upon a knowledge of musical form and structure, and the irrational, which comprises the composite personality of the individual in relationship to the music and implies emotional and conative reactions which may be beyond the scope of the composer's intentions. Jancke states that enjoyment can be on an instinctual level, but it moves to the intellectual level when we try to understand the composition. Weld[7] differentiates four types: the analytic listener, who makes a critical analysis of the stimulus; the imaginative listener, who perceives the music only on the border of his consciousness, having his attention directed to other activity, and tending to be passive as opposed to active in his appreciation; the motor listener, who expresses his appreciation in physical movements such as clicking his fingers, tapping his feet, whistling, etc., either imagined or real; and the emotional listener who yields to emotional responses to the stimuli.

Leonard Meyer's[8] categorization is founded on the different types of mental activity aroused by musical stimuli. His theory of emotions related to musical experience considers suspense, the unexpected, and conscious and unconscious expectations. Otto Ortman's[9] classification is based on the processes by which musical stimuli are understood rather than on the kind of mental activity the music arouses. In discussing the genetic aspect of listening he distinguishes three types of hearers: the sensorial, the perceptual, and the imaginal. The sensorial is the most rudimentary form of response, and requires the least amount of mental effort. It is physiological in nature, characteristic of children and untrained adults. The perceptual type is based on a synthesis of musical components with the ability to perceive the stimuli in relationship to the subject's total environment. The imaginal type of listener can mentally hear the musical background even when it is not present. Ortman states that the assumption that the layman enjoys music more than the musician or experienced listener is false. While a musician is just as capable of enjoying a commercial tune on a sensorial level as an untrained listener, his training has enabled him to increase his store of sensorial response, and thus his sources of pleasure; hence his improved powers of comprehension may no longer be satisfied by a popular tune. "The degree to which a musician enjoys an unfamiliar work, apart from its sensorial aspect, is determined by the degree to which this work can be brought into agreement with the idiom with which the musician is familiar; that is to say, the degree to which it can be recognized. The richer the past experience in variety of auditory data, the more numerous will be the points of contact--points where active attention begins to become passive--and the greater will be the enjoyment."[10] Surely this has implications for a study of jazz as a means of leading to an appreciation of contemporary music, for it is the hypothesis here that if the student has contact with a variety of stimuli directly related to an unfamiliar stimulus (jazz being related to contemporary music), there will be points of contact enabling greater transfer of training than if the subject passed from unrelated or less related stimuli (for example, a listening program in traditional classical music) to the new stimuli. Ortman also states that perceptual and imaginal types of listening may become fatiguing since they require close attention. However, he feels that the fatigue may be offset by increased pleasure which results when the listener comprehends the music.

Roger Sessions[11] distinguishes four stages in the listener's development.

> First, he must hear. . . . It is . . . opening one's ears to the sounds as they succeed each other, discovering whatever point of contact one can find, and in fact following the music as well as one can in its continuity.
>
> The second stage is that of enjoyment or . . . the primary response. . . . The listener's reaction is immediate and seems in a sense identical with the act of hearing. . . . One may listen to music attentively without any conscious response to it until afterwards; one's very attention may be so absorbed that a vivid sense of the sound is retained but a sense of communication is experienced only later. It is this sense of communication to which I refer under the term "enjoyment." . . .
>
> The third (phase) . . . is "musical understanding." . . . Understanding of music, as relevant for the listener, means the ability to receive its full message. . . . In the primary sense, the listener's real and ultimate response to music consists not in merely hearing it, but in inwardly reproducing it, and his understanding of music consists in the ability to do this in his imagination. . . . What the layman needs is not to acquire facts but to cultivate senses; the sense of rhythm, of articulation, of contrast, of accent. He needs to be aware of the progression of the bass as well as of the treble line; of a return to the principal or to a subsidiary key, of a far-flung tonal span.
>
> The listener's final stage is that of discrimination. It is important that it should be the final stage since real discrimination is possible only with understanding; . . . We will learn to differentiate between lasting impressions and those which are fleeting, and between the musical experiences which give full satisfaction and those which only partly satisfy us. We will learn to differentiate between our impressions, too, in a qualitative sense. In this way, we cultivate a sense of values to which to refer our later judgment. We will learn that music is unequal in quality . . . that some works last in our esteem longer than others without necessarily lasting forever. We will learn . . . to differentiate in the matter of character, to be aware of the differences between works in ways which have no relation to intrinsic worth. In other words, we will become critics.

Lee[12] distinguishes between two methods of musical reception. Hearing is defined as essentially a response to the subjective implications of the music, to its suggestive and associative possibilities. The hearer is incapable of following musical form as such, and compensates for this lack by musical daydreaming and calling up extra-musical thoughts, associations, and memories. The listener, on the other hand, pays active attention to details of the composition and performance. This implies an intellectual understanding of the musical complex. Vernon[13] uses the terms "indefinite" and "definite" in his discussion of two types of listeners. Both writers agree that the two types are interchangeable, one type occasionally engaging in the other type of listening. Hartshorn distinguishes between the physical ear which hears sound, and the inner ear of the mind through which one can think tone. He defines the ultimate listening experience "as being achieved when at a point of emotional climax in the music, there is also a flash of understanding that reveals a hitherto unknown relationship of form--at the same moment."[14]

Effects of Repetition

Repeated hearing of music tends to affect the listener in a variety of ways. Research has been undertaken to study the effect of repetition and familiarity on trained and untrained listeners.

Washburn, Child, and Abel[15] designed an experiment in which music was classified into four categories: severely classical, serious popular classical, easy popular classical, and popular. College women served as subjects, 107 of whom were classed as musical, and 113 as unmusical according to answers given to questions such as "have you ever had music lessons?" The experimenters played five consecutive performances of one minute duration, always using the first part of the record, allowing for the completion of a theme. They concluded that repetition lessoned the enjoyment of very popular music (although, in general, five repetitions increased somewhat the pleasantness of the other types of music), and that pleasantness was reduced sooner for the musical than for the non-musical. Fatigue was thought to be the most apparent cause of the unpleasantness in the repetitions, though this term was not defined. They reported that repetition increased comprehension of melody, harmony, rhythm, and aroused greater association. The writer feels that a more positive increase in pleasantness might have been obtained if the selections had been longer. Most serious music composition included the theme statement with some repetition, a digression, often quite different in character, then a return to the theme. Especially for the more musical listeners, the complete exposition of a theme, repeated five times with no contrasting sections, could easily become an unpleasant experience.

Downey and Knapp,[16] playing eight compositions once a week for five weeks, found that repetition increased pleasantness. In addition they reported that the position of a composition in a program influenced its degree of pleasantness; first and last places in the program were the most effective positions. Moreover, for the inexperienced listener a "light" encore lessened the affective rating of the less obvious succeeding selections, while the reverse is probably true for the musician. This is probably a function of anticipation and expectation.[17]

Schoen and Gatewood,[18] in an early study, observe that familiar selections were enjoyed greatly while new selections gave only moderate enjoyment. They point out that familiarity plays a more important part in the amount of pleasure of the somewhat musical than in that of the highly musical. If musicality is measured by musical background--exposure to music lessons, good music, participation, and the like--then it would seem wise for the junior high general music teacher to assess the musical background of her students and plan repetition of selections accordingly. The authors conclude that the less musical person's enjoyment is conditioned upon the degree of familiarity with the selection. The experimenters found that both the highly trained and the untrained listener become bored and annoyed with music that is too distant from their capacity. The skilled listener has a greater intellectual understanding and finds a richer stimulus challenges his interest more than it does the untrained listener. Thus, the effect of repetition may be more beneficial in music of a complex nature, and is more apparent in highly skilled listeners.

Nash[19] found that the repetition of the same type of music indicated no consistent increase or decrease in enjoyment unless the same record was repeated, in which case enjoyment increased. Hornyak,[20] in a study of 1,300 school children, states that results from his study show that familiarity with contemporary music from one previous hearing did not seem to significantly affect the manner of response of the students.

Maslow[21] discovered that sheer repetition, leading to familiarity, may result in greater liking for an activity. He stated that repetition leads to affective as well as cognitive change. Getz[22] investigated the effect that familiarity, based on repetition of previously unfamiliar serious musical selections had on 339 seventh graders. Forty recorded orchestral excerpts were played four weeks prior to the testing situation and rated from 1 (low) to 9 (high) by the students. From the original forty, five compositions, rated from like to dislike, were called the constant set, being played repeatedly during the ten-week experimental period to act as determinants of change in preference. The 6th and 8th hearings seemed to be the optimum points. Preference scores were higher after the 10th week of repetition than at the preliminary hearings. I question the experimenter's attributing the 24% dislike reactions to fatigue, although this might become clearer when reading the study in its entirety rather than in abstracted form. Reasons given by subjects for disliking a work were too loud volume, jumpy melody, dissonance, and minor mode. For the 41% who gave like response, the reasons were fast tempo, variety of volume, melodic repetitions, flowing rhythm, jumpy melody, variety of melody and mode. Getz suggested that teachers wishing to interest students in serious music select, initially, highly rhythmic compositions of a fast tempo and distinguishable melody.

Daniels,[23] in her study of the effect of exposure to contemporary music to ninth graders discovered that there was a marked increase in favorable responses to contemporary music after a two-week period of instruction in contemporary music. She also pointed out that the students seemed more able to classify certain compositions according to five established categories of contemporary music, such as impressionistic, neo-classic, and the like. The effect of repetition with instruction led to greater understanding and enjoyment.

Mull[24] played the first movement of a Schoenberg String Quartet and the second movement of a Hindemith String Quartet for sixteen music students at Sweet Briar College who were rated high for their "musicality." The compositions were played one at a time for two sessions, one hour per session, in two successive weeks. Mull felt that five presentations would provide familiarity without surfeiting the listener. For half the group, the order was S (Schoenberg), S, S, H (Hindemith), H, H, the first week, and H, H, S, S, the second. For the remaining eight subjects, H, H, H, S, S, S and S, S, H, H was the order for the first and second weeks, respectively. Both selections gained in general affectivity of response: whereas four subjects had liked the Schoenberg and three the Hindemith at the outset, the corresponding figures at the conclusion of the study were eight and ten. However, Mull concluded that neither composition studied was generally much liked, even at the end of the study. She stated that familiarity with serious modern music usually increases enjoyment, and that initial dislike may change to a liking for a work after repeated hearings. Moreover, she found that there were general popular and unpopular areas in both compositions, and felt that serious modern composers should include some of the basic features of traditional music in their work.

Gilliland and Moore[25] played four records five times a day for five consecutive days. The selections were from Beethoven's Fifth Symphony, Tchaikovsky's Sixth Symphony, and two current "jazz" pieces. Thirty-five college students rated the compositions on a ten-point scale for pleasantness each time they were heard. Various physiological data such as strength of grip, pulse rate, and photographs of the subjects during their listening sessions were also included in this investigation. Beethoven and Tchaikovsky had an initial advantage which was raised by the repetitions, while the ratings for the "jazz" pieces remained constant.

The reviewer questions the use of the term "jazz" in this study. Even today, much passes under the name "jazz" that is not jazz at all. The experimenters say the two selections represent popular or jazz music, but throughout the study, they refer to these selections as jazz. The pieces were a fox-trot, entitled "That's It--A fox-trot," and a one-step, entitled "Umbrellas to Mend." Since this study was done before 1927, these selections probably are not true representatives of the (then) contemporary jazz idiom, which could have been more adequately represented by selections by Sidney Bechet, Duke Ellington, Fletcher Henderson, Kid Ory, the Original Dixieland Band, James P. Johnson, Louis Armstrong, Coleman Hawkins, King Oliver, or blues singers such as Ma Rainey, Bessie Smith, Big Bill Broonzy, or Mamie Smith. The effect of a fox-trot repeated twenty-five times might be likened to playing the most insipid rock and roll tune twenty-five times in a row. The writer hypothesizes that the results might have been different if jazz truly representative of its time had been used as examples. Otherwise, the writer feels the term "jazz" should not have been used in this study.

Moreover it is quite possible that the students were already familiar with the Beethoven and Tchaikovsky selections, and thus, more repetition and hence familiarity continued an advantage here which the other selections could not overcome. The writer feels that it might have been more appropriate to use less well-known classical selections.

However, an important conclusion of the Gilliland and Moore study is that it is the rhythm which first attracts the listeners' spontaneous attention. Other musical values gradually unfold upon repeated hearings of the selection. For a study proposing to use jazz as a medium to facilitate the understanding of contemporary music, this is highly significant. The rhythm of jazz has been an attracting force throughout its brief history. Indeed, the strong rhythmic appeal of jazz may serve as a motivating force for the students in the proposed program.

A more adequate representation of jazz was used in the Krugman[26] study, which included six "swing" or "jazz" selections, including jazz musicians such as Duke Ellington, Charlie Barnett, Gene Krupa, and eight classical selections. Seven students, chosen as subjects on the basis of an attitude questionnaire and personal interviews, in the college age group served as subjects. The records were played once a week for eight weeks. A weakness of the study is that not all subjects heard the same music. Three subjects who showed an initial preference for jazz were played classical excerpts, different selections for each person, and the three who rated themselves as preferring classical music at the outset heard jazz and swing music, again, different selections for each subject in this group. The one person who served as "indifferent" to either type of music heard both jazz and classical selections. The writer feels the number of subjects in this experiment was insufficient for reliable conclusions. Also, since the subjects within groups did not hear the same music, the controls on the listening were inadequate. Certainly the three subjects in a given category should have been played the same music to have a more valid measure. Moreover, the study might have been more meaningful if each person had listened to his preference in addition to music for which he had expressed no preference, and then a cross comparison between groups had been made. Krugman admits that the picture has been somewhat oversimplified, and that different types of shifts in the individual subjects' responses to different records indicate that there are great individual differences in affective shift.

Taken as it is, the study shows that the positive trend is as marked for swing and jazz as it is for classical music on repeated hearings. Most subjects developed a liking for the type of music that they were exposed to. At least for the first six weeks, the effects of satiation, boredom, and fatigue were slight. Thus, shifts in the direction of greater pleasantness exceeded those of unpleasantness, both in swing and classical music. The experimenter also states, "If complexity of music is the key to affective quality, it is understandable that the life span of the classics is so much greater. However, it is also true that popular selections are played more often in their limited life span. Ultimate regression towards an indifference point may therefore take place faster."[27]

Verveer, Barry, and Bousfield[28] divided fourteen subjects into two groups. The undergraduates rated two "jazz" selections on a -10, =10 scale during two listening sessions, which lasted over an hour, a week apart. One group served as a control group. The experimenters found that closely spaced repetition tends to increase pleasure to an affective peak at an optimal level of familiarity. Further repetition from this point on tends to make the listening experience progressively less pleasant. However, an intervening time interval tends to enhance the pleasure of subsequent repetitions. The authors state that Fechner's law thus applies: "With a continuous (or repeated) stimulus, the affective value increases up to a certain limit. . . . If the stimulus is continued or repeated past the point of optimum affectivity, its value is lessened . . . unless there is an intervening time limit."[29] The writer recommends similar experimental conditions but with a larger number of subjects for more reliable conclusions.

Hare[30] states that the form, style, etc. of each work the student hears, except for the first one, is associated with that which precedes and follows it. Thus it would seem from these studies that teachers would want to carefully sequence listening materials and space repetitions thoughtfully.

The Influence of Age, Sex, Socio-Economic Background and Other Factors on the Appreciation and Preference of Music

Mueller[31] states that musical taste is a social phenomenon, and that it is codified and culturally transmitted through the school, church, home and other social avenues. Fisher,[32] in a study of 251 students, varying in age from ten to twenty-five, and in sex and socio-economic background, played five classical compositions (Haydn, Strauss, Stravinsky, Tchaikovsky, and Gould) full orchestra, infrequently played compositions. Socio-economic status was divided into professional-managerial, skilled, and unskilled classes, based on the father's occupation. Sex proved to be an entirely negative variable. No clear cut preference differences between age groups or socio-economic groups manifested themselves in this study. The author concluded that classical music preference differences between age, sex, or socio-economic groups are largely a function of the transmission of specific judgments about particular compositions rather than a more generalized frame of reference that goes beyond specific compositions. Thus, the author postulates, factors usually operating to produce differences in preference reactions to known classical music do not operate appreciably in unstructured situations with unknown and unfamiliar classical compositions.

Rubin,[33] in a study of 300 seventh, ninth, and twelfth grade students, found that previous musical training, as defined by a questionnaire designed by the author, appeared to have little effect on musical enjoyment. Both the musically experienced and inexperienced were partial to the current popular music. Interest in art music tended to increase slightly from seventh to twelfth grade among the musically experienced pupils. For the untrained and musically inexperienced students, it decreased. Student preference for art music and "current" music appeared to be negatively correlated. Duda,[34] in reviewing the Rubin study, states that there was an arbitrary weighting of the scores obtained on musical experiences inventory, a failure to consider participation in school or community organizations as unique, and no attempt made to determine the nature of the musical experiences within a category--all of which might cause the conclusions drawn to be somewhat erroneous. Duda advises that instead of drawing the conclusion that musical experiences have little effect in developing ability to make musical discriminations it would be wiser to "postulate that the nature of the musical experiences was such that the ability to make musical discriminations was not developed."[35]

Parker[36] conducted a study of 1,174 Kansas high school students to determine the relationship between aesthetic sensitivity to musical ability, intelligence, and socio-economic status. Aesthetic sensitivity was determined by Wing's Tests of Appreciation, musical ability by Gaston's A Test of Musicality, and I.Q. scores from acceptable intelligence tests (supplied by registrars of cooperating schools). A rating scale, Warner's "Occupation Rating Scale" was used to categorize the subjects according to the occupations of their working parents. Parker concluded that only a moderate relationship existed between aesthetic sensitivity and musical ability, intelligence and socio-economic status being held constant. The relationship between aesthetic sensitivity and socio-economic status was negligible.

Bauman[37] found that generally, popular commercial music was the most acceptable to all teen-agers without differentiation as to age, socio-economic class, or sex. He suggests that "since popular or commercial music proved most acceptable to all teen-agers, it might be well to gather and evaluate techniques for using it in general music classes. This is not to argue that commercial music should be the subject matter of such classes, but jazz and current song hits can furnish meaningful illustrative material. . . ."[38] 600 teen-agers took part in the study. The fifty items included twenty popular, twenty classical, and ten "traditional" items. Bauman states that although preference differences were sometimes significant, there was not enough evidence to warrant using one type of music in a general music class of a poor neighborhood, and another in a wealthier area. However, he feels the teacher would be wise to consider the differences in some choices of music. The study also suggests the possiblity of music readiness. Social and physical maturation suggest that some music may be more acceptable at one time than another: perhaps Bartok and Stravinsky, or jazz, might be more appropriately presented than Haydn and Mozart or folk materials at a given age level, or vice versa.

Watson[39] used fifteen types of meaning agreed upon by "experts" in his study. Growth from lower to higher age levels was found to be in the direction of the experts' judgments. Subjects at the lower levels of understanding or age might not recognize or appreciate musical factors which determine meaning. These factors, however, are constant and will be recognized when the subject has more complete musical experience. The appreciation of music was thought to be dependent on musical understanding.

The Rogers[40] study also found that students of all ages tended to prefer popular music over other music. More seventh and ninth grade girls preferred the "current" music to classical than boys, probably because of early maturation. The preference of both sexes was intensified and was the greatest at the high school level. Thus, with increased age, children tended to conform more and more to a single pattern of music preference. There were 635 school children in the fourth, seventh, ninth, and twelfth grades in six school systems in this study. The test consisted of a fifty-seven item-paired comparison with the following categories: seriously classical, popular classical, dinner music, and popular music. There were three sessions, each one and one-half hours. The forty-five second auditing time seems hardly long enough for a fair hearing of a classical work, though it may be quite sufficient and allow complete auditing of the entire thirty-two bars of a standard popular song. The reviewer also feels the length of the sessions was too long, and suggests that thirty or forty-five minute sessions might have been more appropriate. Certainly, fatigue must have entered in here. Rogers found that socio-economic status was not a strong enough factor to break the basic pattern of preferences displayed by all children on the test. However, it was apparently strong enough to cause a difference in preferences. Children from the upper socio-economic class tended to have a greater preference for classical music than lower-class members. However, this diminished somewhat with increasing age.

Schuessler[41] used occupation as an index of the subjects' socio-economic background, and musical taste was defined on a five-point scale. The relationship between the two was measured by classifying a set of individuals by musical taste and by socio-economic background, then determining whether these two categories were separate. There were 1,077 subjects. Schuessler found that musical taste is governed by the biases and attitudes that in turn reflect the differentiating forces of occupation, age, sex, or culture.

Kelly,[42] in a study of 210 students from age thirteen to nineteen at a summer band camp, found that sex difference had little or no effect on musical preferences. This was a select group of musically trained adolescents. One-half of the subjects had one parent who had had musical training. For one-fourth, both parents had had private musical study; for the remaining fourth, neither parent had experienced musical training. Almost all homes of the subjects had a television, radio, and record player. Those showing a preference for listening to music on the record player showed greater preference for classical music than those who liked to listen to the television or radio. However, over one-half of the subjects preferred live performance to any of these media.

Music was categorized into classical, semiclassical, and popular. There was an increase in preference for classical music from eighth to twelfth grade, probably lending support to the idea that preference is related to training. Indeed, the preference for classical music was over fifty per cent for all grades except the eighth and ninth who were the least trained in this group and probably most resemble the general population. Kelly concludes that the preferences of the subject group may be higher for classical music than the general population because of their musical training and background.

Thus, from the evidence from these studies, it appears that except for highly trained students, most subjects prefer the current or popular music over other types of music. Socio-economic background and age, in general, have significant relation to preference and appreciation of music as perceived in structured situations, at least through the high school level. Farnsworth's[43] statement that musical taste is related to a particular time and cultural area appears to be valid. The evidence concerning musical taste is inconclusive as to the effects of sex or intelligence on musical preferences.

The Nature of Enjoyment and the Sources of Pleasure in Music

Hartshorn has summarized the types of compositions that reflect the various degrees and kinds of associative ideas and their implications for the listener (see Hartshorn, note 14).

1. Music not intended by its composer to indicate a specific extramusical meaning but, nevertheless, expressive of feelings growing out of experiences in the life that are authentically related to the music in that they affected its nature.

2. Music in which the composer has indicated a title, and perhaps only a slight suggestion of a general idea that sets the listener's thinking into a broad area of imagery without involving specific points of illustration.

3. Music which the composer relates to different associative ideas but their nature is such that the listener is unable to discover them in the music itself.

4. Music which the composer relates to associated ideas which are so clearly suggested in the music that the listener can discover them for himself.

Merrill and Mull,[44] in a study involving thirty Sweet Briar students, found that definite preferred regions in pieces exist. These regions tend to be considerably larger for the musical than for the unmusical subjects. Moreover, the unmusical were less consistent in their preferences than the musical subjects. Of 1,765 "high spots" the experienced listeners noted, 491 were common to all in this group. For the unmusical, of 859 "high spots," only 130 were common.

An early study by Schoen and Gatewood[45] showed that the responses which music aroused are consistent: the same effect, particularly the dominant effect, would be present upon repeated hearings. Washburn and Dickinson[46] found more enjoyment from compositions which were markedly exciting or quieting than from neutral compositions.

Gatewood[47] lists four factors which enter into what we call pleasure. First is the physical, which depends on the rhythm, melody, harmony, and timbre felt in the listener or in the music. Second is the represented content (as opposed to the presented content of the first). Here our associations and memories are called up. Third is the ideational, including interest in thought and structure of the composition, and fourth the emotional: what kind of feeling does the music give the hearer.

Gatewood found that emotional qualities were learned more readily in vocal than in instrumental music, a fact apparently due to the words representing emotional meaning. Instrumental music, however, was found to be a more effective stimulus in generating effects such as joy, amusement, tenderness, and strength. She found a small range of variation between individuals, thus lending reliability to the concept that some marked emotional effect accompanies marked musical pleasure. Other things being equal, the selections showing high emotional effect were most enjoyed. Individual differences were pointed out in that not all people hear the same elements, nor do the same elements give the same experience to each.

Moreover, Gatewood found that marked rhythm in music was a major element in creating the feeling of happiness and excitement or stir. She also stated that the understanding of different instrumental qualities is a function of maturation, e.g., the cornet or trombone with their brassy sound is more enjoyable to the youths of ten to fourteen than the tones of a violin. This is not to suggest that something is wrong with the child's taste or appreciation. Rather, it might be wise not to force string quartet music, for example, on to children. This lends support to the idea of using twentieth century art music, including jazz, in the junior high school as a primary means of leading children to a better understanding of music. While in recent years jazz has achieved a wide variety of tone colors and instrumental timbres, it must be conceded that at least historically the primary instruments of jazz were the drums, piano, trumpet, saxophone, string bass, and, to a lesser extent today, the trombone. The inclusion, then, of jazz with a greater motivational appeal from an instrumental and rhythmic standpoint to junior high school students seems appropriate.

Rigg[48] found that college students can tell if the music played is intended to be sad or joyful. Progressively finer discriminations, however, eluded them. Rigg used eighteen records in two series of nine each, presented at different times to three groups of college men. Students trained in music did practically no better than the untrained in discriminations. Rigg stated that symphonic program notes, in attempting to give appropriate moods, may be instrumental in establishing widespread associations, but in general, their use, as a means of communicating moods in the listener, remains inconclusive. He concludes that there appears to be no justification that certain compositions express such things as "farewell." These feelings seem to be the result of association and are more or less an individual matter.

A later study by Rigg[49] was conducted to determine the effect of favorable or unfavorable propaganda in the enjoyment of music. Propaganda was defined as any attempt to influence judgment, whether it be true or false, justified or unjustified. Six records were used, and a college psychology class served as subjects. All students heard the music without comment, and checked their enjoyment on a five-point rating scale. For the second hearing, the music was presented to the control group with no comment, to a favorable propaganda group in a romantic light, and to a third group in an unfavorable light, being associated with Hitler and German nationalism. The control group gained slightly, probably as a result of hearing the music a second time. The group receiving favorable propaganda doubled their gain when compared to the control group, and the group instructed in unfavorable propaganda lost almost enough to erase any gain from a second hearing.

Nash,[50] in his study of enjoyment of music by junior high school students, found that folk music was more appealing than operatic or orchestral music, and lively orchestral music from the classic period as opposed to slow romantic music, increased in enjoyment upon repetition. There were six test sessions, a week apart, six records, and four types of explanations accompanying each selection in this study.

Most researchers find that musical enjoyment is dependent upon emotion but they have difficulty relating emotion directly to the music. In general, most studies point out that rhythm and melody are the most outstanding sources of enjoyment, followed by texture, form, and timbre. Unfamiliarity with the music and complicated form are listed as the major causes of dislike or indifference.

The Radio and Music Listening

Wiebe[51] studied the effect of radio plugging on ratings by students of popular songs. He found that plugging did not affect the pupil's opinions of those songs more well-liked in the beginning, nor did plugging affect the rating of tunes initially less well-liked. The students liked the ten popular songs that were plugged no more than the thirteen which were seldom or never broadcast in the study. However, the system of controls was inadequate, and by Wiebe's own admission, the data lose relevance.

Busse,[52] in two methods of learning rote singing, one with and one without the use of recordings, found that in the learning of rote materials, the groups using recordings secured consistently better performance ratings in the time-rhythm area than they did in the pitch and general effect areas.

Robert Hare,[53] in his study, found that the radio was not very important in creating an interest in music, but was most successful and effective as a follow-up for other influences. It provided an opportunity for listening, especially in those already having some predisposition toward listening. While the radio creates an audience of new listeners, he stated that there is evidence of a lack of real comprehension in that most people listen to serious music for relaxation, excitement, romance and tend to become passive listeners.

Research in Jazz

While there has been some research in jazz, the main body of these studies are historical or analytical. Other than dance band work, the writer was unable to find any research of the use of jazz in the classroom. Moreover, most articles and books on jazz are unsuited for our discussion here.

The Baskerville[54] dissertation is of relevance here. In this 510 page manuscript, the author discusses the influence of jazz on art music to mid-century. The study was confined to compositions and works most representative to this study, and to composers of international standing in the United States and Europe. "Les Six," Schoenberg, Krenek, Hindemith, Dvorak, Ives, Reigger, William Schumann, Aaron Copland, Morton Gould, George Gershwin, Stravinsky, and Bartok were the principal composers whose compositions were analyzed for the influence of jazz. There was also a brief discussion of the influence of jazz on the works of lesser composers. Concerning harmony and melody, Baskerville states that art music composers have borrowed extensively from what is commonly referred to as the "blue" element in jazz, particularly through the use of the lowered third and seventh degrees of the scale. His investigation showed, however, that composers of serious music have been most attracted by jazz rhythm and timbre. Composers were found to have been attracted to certain instrumental sounds associated with early jazz, such as trombone glissandi, and clarinet solos with high tessitura and various percussion effects--indeed, the least consequential aspects of jazz. Classical composers have expanded jazz' melodic and harmonic expressivity through such procedures as bitonality, polytonality, and non-triadic harmony.

Baskerville states that every twentieth century composer, whether he is aware of it or not, has been influenced by the manipulation of sound per se by the innovations of jazz instrumentalists and singers. There is hardly an instrument today whose range, facility, timbre and variety of expression have not been modified or extended by jazz musicians.

With some classical composers, the spirit and technique of jazz was almost fully absorbed. The most successful fusion of jazz into serious music in extended form was in Morton Gould and in certain isolated works of Copland and Ravel. None approached the broad range of expression through jazz that Gershwin achieved. With other composers, Baskerville showed that jazz was used as decoration, or in a contrived manner, often failing to capture its natural rhythmic vitality. For example, Stravinsky took from jazz what interested him, remaining Stravinsky all the while. The study concluded that the real jazz spirit eluded him. Thus, whether jazz influence on a composer will enhance or diminish the artistic result in every instance depends on the manner in which the composer uses the borrowed material.

"Jazz is only one of countless stimuli available to composers. Despite its humble origin, it is as appropriate an ingredient as any other element in artistic creation."[55] However, Baskerville states that true jazz can be created only from jazz performance. Even if Stravinsky, Milhaud, and others had produced authentic jazz on paper, their music would have remained largely unrealized, for many of our major orchestras are still too inhibited by older traditions to express authentic jazz. Even apart from the question of improvisation, many of our traditionally trained musicians have not become acquainted with jazz technique. With more young musicians who have increasing facility and versatility becoming members of orchestras, the picture is now changing somewhat.

Since the death of Gershwin in 1937, the influence of jazz on art music has dropped sharply. However, in the late 1950's jazz and serious music seemed to merge into what some choose to call a "Third Stream." Baskerville feels this development may be of great significance, but states we are too close to it today for objective analysis.

This research points out the extensive influence of jazz on contemporary music. Thus, a program in jazz listening would be one means of facilitating understanding of contemporary music.

Further Implications of Research for the Listening Program

If it is true that we enjoy music in direct proportion to ego involvement with it, a listening program should try to involve the students. The strongest way of involving students appears to be through arousing interest in the music itself. Hare[56] states that interest is the motivating force which causes the pupil to give attention to an object. Immediate interest is only concerned with itself, while mediate interest is a means to an end. The task for the music appreciation instructor, according to Hare, then, becomes one of helping the student develop mediate interest in things which are a part of the whole. These mediate interests of the untrained person may be given momentum through the inclusion of biographical or historical information.

Keston,[57] in conducting a study with eighty-nine senior high school students, used a zero control group, a control group exposed to serious classical music, and an experimental group hearing serious classical music with discussion and explanatory comments. He found that the method utilizing commentary and discussion proved to be superior to the method lacking comments or the zero control group in developing appreciation in conjunction with listening. In a later study[58] Keston found that the most important factors influencing music preference and development were introversion, music recognition, and music training.

Beale[59] came to the conclusion that the listening program is most productive when the "directed listening" technique is used, and when the attention and interest of the student is involved. Weigand[60] suggests that poor organization and presentation of materials was a major cause of ineffective teaching in general music classes in the junior high school.

Hare,[61] in discussing attention, points out that the more intense the music stimulating the listener, the more likely it will attract attention. Moreover, he feels it behooves the music appreciation teacher to take great care in choosing compositions which will not tax the untrained listener's attention span. Both the listener's past experiences and the present conditions (*i.e.*, the teaching and listening situation) will together determine *how* he will pay attention and to what.

Robert Cowell[62] feels that there does not seem to be any approach to aural understanding: the pupil is expected simply to listen, without any method or system through which the instructor can make the listening meaningful. He further states that "most of the recordings offered are song materials rather than art music, and none of the texts contain suggestions for understanding the musical selections referred to or described. . . . Lacking training in listening, pupils become attracted to the easily understood sounds of popular and commercial music and refuse to wrestle with the problems presented by art music."[63]

Cowell believes that the public schools have failed in their music listening program, and he attributes this neglect of listening to a lack of knowledge about the listening process and the role of specific skills and knowledges in it, and to the lack of a teaching method with feasible goals and evaluative tools. "In order to teach the pupil how to listen with understanding, the teacher must know what things in the music are essential for his comprehension so these can be pointed out, explained . . . the teacher must also know what skills and knowledges are necessary for the pupil to grasp the essentials of the music."[64] Cowell bases much of his study on Leonard Meyers' "Theory of Expectations,"[65] and attempts to examine reactions of skilled listeners by identifying elements common to all of them, comparing these with the reactions of unskilled listeners. He feels that physical reaction, which is automatic, and emotional responses which are dependent on subjective factors, need not be emphasized in the classroom. Cowell suggests that teachers should not attempt nor expect to teach pupils a stronger liking for music, but should show them what is to be found in music.

Hornyak[66] conducted a study to analyze student attitudes toward contemporary American music. Part II of this study dealt with 1,300 school children, 411 of whom were in the junior high school category. Special instruction relating to stylistic features of the music, and to historical and biographical backgrounds did not significantly affect the way the students responded to the music, though special instruction in stylistic features of the music tended to encourage more favorable responses to those compositions which utilized serial technique, atonality, pointillism, and dissonance than special instruction in historical or biographical backgrounds did. At all age and grade levels, the students consistently made more favorable responses to fast tempo movements than slower tempo ones.

The experimenter concluded that a major finding was a lack of comprehension of what the contemporary American composer is doing. "Aesthetic attitudes are developed in part as a result of the nature and extent of the auditor's understanding of the musical art. Therefore, if the listener is to accept the creative efforts of the contemporary American composer, he must understand what the composer is doing. This does not mean that understanding will automatically result in approval and acceptance. But it does suggest that an understanding of what the composer is doing will aid in the ultimate approval and acceptance of the efforts of the composer by his audience."[67]

Archibeque[68] found in her study that seventh grade students seem to prefer contemporary music to music of earlier periods regardless of study or lack of study of this music; and students who had studied contemporary music indicated a greater preference for an experimental type of composition than students who had not studied it.

FOOTNOTES

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16. June E. Downey and George E. Knapp, "The Effects on a Musical Program of Familiarity and Sequence of Selection," *The Effects of Music*, ed. Max Schoen (New York: Harcourt, Brace and Co., 1927), ch. 12.

17. For a more thorough discussion of expectation the reader is referred to research by Cowell and Myer.

18. Max Schoen and Esther Gatewood, "Problems Related to the Mood Effects of Music," *The Effects of Music*, ed. Max Schoen (New York: Harcourt, Brace and Co., 1927), ch. 8.

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CHAPTER III - PROCEDURES

The investigation to be presented studied the effects of a guided listening program in twentieth century art music on junior high school students. The experiment took place during the spring semester, 1968.

General Design of the Experiment

The experiment consisted of a pattern of pre-testing, training, and post-testing of four treatment groups. The four treatment groups are identified as follows:

T1 - experimental group which received guided, taped listening lessons to twentieth century art music.

T2 - control group which received Leonard Bernstein taped listening lessons, exclusive of twentieth century art music.

T3 - control group consisting of the general music classes which did not receive a guided listening experience.

T4 - zero control group which was not exposed to musical instruction.

The zero control group (T4) was used as a baseline to assess the amount of change in aesthetic judgments which might result merely from the passage of time, contemporaneous events, maturation, and other factors. The musical control group (T3) measured the growth in musicality which might result from different instruction. The listening control group (T2) served as a control on the effect of the tape recorder and twentieth century art music in a listening program. The following diagram indicates the design of this project.[1]

Sample	Pre-testing	Training	Post-testing
Treatment group 1	01	X1	02
Treatment group 2	01	X2	02
Treatment group 3	01	X3	02
Treatment group 4	01		02

0 = test X = treatment, training in respective program.

All tests and listening presentations were submitted as regular parts of the work of the general music class. The regular music teacher administered the tests and presented the taped listening cirriculum.

The investigator met weekly with each teacher during the period of the experiment to distribute materials and to confer on the lessons. In addition, the experimenter conducted in-depth interviews with participating teachers after the experiment had been concluded and the results tabulated.

Population and Sample

Subjects for this investigation were drawn from the seventh grade from five junior high schools in the immediate San Francisco Bay Area public school systems. These metropolitan school systems were chosen because of their proximity to the University and its facilities, and the heterogeneity of the total population represented by these school populations.

The junior high school level was selected for these reasons: (1) music is required of all students in either the seventh or eighth grade by the participating schools, (2) "general music" is taught in a variety of ways in these schools, (3) there is no mandated course of study, (4) junior high school music offerings are of interest and concern to music educators throughout the country, (5) the academic respectability of the general music course is being questioned.

All of the general music classes in each school were randomly assigned to one or the other of the treatment groups. Treatment group one was comprised of students in one seventh grade general music class in each school, chosen randomly from the available seventh grade general music classes in each school. The remaining seventh grade students composed control groups and were equated to the experimental group on pre-test scores on a test of aesthetic judgments in music.

If, at the end of the investigation we would question that a program in music listening to twentieth century art music is a "sure developer of musicality," i.e., the ability to make aesthetic judgments in music for all children, we examine the schools to see if such a program is equally effective at each socio-economic level. Perhaps the same education is not equally effective for all populations.

As an index of socio-economic status, occupations were grouped into three categories.

I. Professional and college educated. Included were lawyers, doctors, professors, teachers, clergymen, executives.

II. White and blue collar workers. Bank tellers, managers, supervisors, secretaries, salesmen were among the occupations listed in this category.

III. Skilled and unskilled workers. Listed in this group were janitors, longshoremen, busdrivers, and similar occupations.

Parents or guardians of children who were unemployed, deceased, or for whom it was not possible to obtain occupational information, were disregarded in this listing. Occupations of both parents were counted, and if there was a discrepancy between parents the index of the particular child was "averaged," i.e., if the father was a professor and the mother a maid, the listing for that child was a "2." All the subjects in the participating classes were then totaled to see which categories of occupations were most represented in the schools.

Schools A and B are both 55% Negro. In school A, the instrumental performing groups are not of the highest quality. None have participated in the state competition festivals. Little or no private instrumental study exists in either school. In school A, 25% of the students were in the "1" category, 44% in the "2," and 31% in the "3." In school B, 56% were in the "2" category and 44% in category "3."

School C was a racially balanced school, having nearly equal numbers from Anglo-American, Mexican-American or Italian or Oriental, and Negro backgrounds. Reading of music and music history is stressed. Here 5% belong to the "1" group, 67% to the "2" and 28% to the "3" category.

School D represents the lower middle-class population. There are few non-Caucasians in the entire school system. The musical background provided in the school is slight; there is little emphasis on music in the elementary grades. The experimental class was a self-contained classroom, and the program was taught not by a music teacher, but by the classroom teacher. It was the only music the children received during their seventh grade year. It is doubtful whether many children in this junior high know how to read music; only four out of the class had ever studied an instrument privately. Yet 31% belonged to group "1," 63% to group "2," and only 6% to group "3."

School E represents the upper middle-class population. Students come from professional families as a rule, and are educationally motivated. Many of the students in the general music classes also study instrumental music. There are few non-Caucasians in the school. A full 69% belong to the "1" group, with 31% in the "2" category.

The following table gives an indication as to reading scores, intelligence quotients, per cent minority of the participating school systems.

TABLE 1. Alameda County[2]

	Reading Score				IQ		Per cent Minority
District	Grade 1	3	6	10	Grade 6	10	
Alameda	57	51	52	47	99.8	99.7	18.6
Albany	73	73	64	62	104.6	106.7	14.7
Berkeley	58	67	57	58	103.7	103.8	54.1
Castro Valley . .	65	66	61	55	103.0	103.8	6.1
Fremont	64	55	52	47	100.6	101.5	13.1
Hayward	63	53	48	48	99.3	99.9	20.4
Livermore Valley	57	65	63	58	104.7	103.5	--
Murray Elementary	65	56	51	--	100.3	--	4.6
Newark	53	58	45	41	97.3	96.8	19.7
New Haven	45	41	38	39	95.3	94.0	42.5
Oakland	49	40	33	31	92.8	92.6	64.8
Piedmont	68	80	79	82	111.1	113.5	3.1
Pleasanton Elem..	57	56	64	--	105.8	--	4.4
San Leandro . . .	73	65	54	47	100.4	101.9	13.2
San Lorenzo . . .	56	55	51	46	98.6	101.0	13.5
Statewide average	50	50	50	50	99.3	100.6	--

The Experimental Music Listening Curriculum

The experimental group (T1) received guided listening in twentieth century art music for a period of nine weeks. Two half hour listening lessons were presented to this group each week. To standardize the presentations so as to control extraneous variables, all music and commentary of the experimental program for each session was taped.

The instruction for the experimental group was patterned after the Leonard Bernstein Young Peoples Concerts tapes. Each piece of music was presented for listening accompanied by brief comments on major stylistic elements, discussion about the composer, and historical information. The curriculum aimed at presenting a spectrum of what is available in twentieth century art music, and, perhaps in this way to plant seeds of receptivity in the young listener. Musical materials presented in the listening sessions were carefully selected as to musical quality and as to authenticity or representation of the style being studied. The selection of recordings was also limited by the course of study, the availability of the recordings, and the requirements of the experiment. Speaking broadly of the problem, Andrews and Leeder state that "the selection of (listening) materials poses the problem of combining interests with the selection of a well-balanced musical diet rich in the essentials which will build the desired foundation for intelligent and discriminating listening."[3] Every effort was made to include the various styles of serious twentieth century music in the experimental curriculum: Impressionism; Nationalistic music including works by Bartok, American composers, and jazz; Hindemith and Gebrauchmusik; atonality and twelve tone music; Stravinsky and his various styles; percussion music; electronic music. Some of the concepts discussed included: three part form, theme and variation form, counterpoint, program music, sprechstimme, parallel chords, the concerto, ostinato, sonata and symphony, and instrumental colors and the instruments of the orchestra.

It was felt that jazz and jazz-related music should be added to the music listening program. Although less controversial than even a decade ago, the inclusion of jazz in the music curriculum of the public schools in the United States still has not won general acceptance by the large majority of music teachers. However, current literature in music education, including articles and studies by Konowitz,[4] Krone,[5] and Feldman,[6] indicate that jazz is headed toward a larger measure of respectability. "Clearly and boldly, (jazz) stands as the music of our time. This truly is the American art form," writes Harold Goldberg in the Music Educators Journal.[7] "Can we overlook America's original contribution to the world of art? . . . We cannot ignore the idea that there is a meaningful place for jazz in American education"[8] states A. L. Zeiger. The place of jazz in the public schools may be more secure in the future by an act of the 1968 convention of the Music Educators National Conference which officially accepted as a part of the M.E.N.C. the National Association of Jazz Educators. Indeed, one entire evening concert at this convention was totally devoted to a program of jazz. Thus, the placing of a small amount of jazz in this listening curriculum was considered justified.

Several guidelines for the selection of recordings were established.

1. The music should have high musical value.

2. With few exceptions, the music should generally be available to the listening public through commercial recordings or in public concerts.

3. The music should represent one of the three broad areas identified as follows:

   a. Instrumental music ranging from solo to full orchestras.

   b. Vocal music ranging from solo to large ensembles.

   c. Jazz, jazz-related, or jazz-influence music.

The complete list of selections used in the study is shown in Table 2. From this list we can see that the listening selections included not only the music of well-known composers, such as Bartok, Berg, Hindmith, Stravinsky, but also selections from more recent "experimental" composers, such as Cage and Marshall. Jazz artists such as Patterson, Fanta and Hackett were also included. A special effort was made to include works by American composers and performers. The Appendix contains the listening lessons in their entirety.

Although some research studies (dealing mainly with college populations) recommended repetition of musical works, the author was more inclined toward the results of Hornyak[9] who, in his study of 1,300 school children found that familiarity with contemporary music did not seem to significantly affect the manner of response of the students. It was felt that the low attention span of the students of this age level, particularly in the sample described as "deprived," called for variety and novelty in the form of short excerpts from a wide selection of works. There was, of course, some repetition, but only in a few cases, such as the Rite of Spring, and in certain jazz selections where a pilot study snowed exceptional student interest, were more extended sections played and repeated. The investigator believed that an entire course based on a few works or on a few types of music, for example Impressionism or atonality, would shortchange the student and not hold class interest. Similarly, it was hoped that through the wide exposure of the vocabulary a few ideas could be seeded, and some familiarity with terms and concepts developed.

The Control Listening Curriculum

For the control listening curriculum this research was fortunate in having available nine taped recordings of the Young People's Concerts by Leonard Bernstein and the New York Philharmonic Orchestra. Mr. Bernstein is gifted in his ability to communicate to his audience through both the spoken word and his own performances of masterworks with the New York Philharmonic Orchestra. He is enthusiastic, and frequently uses the experiences of modern youngsters to illustrate his analogies.

TABLE 2. MUSICAL SELECTIONS USED IN THE EXPERIMENTAL STUDY

Performer or composer*	Title
INSTRUMENTAL MUSIC	
Debussy	Reflections in the Water
	Clair de Lune
	Sunken Cathedral
	Children's Corner
	Clouds
	Afternoon of a Fawn
	Iberia
Ravel	Le Tombeau de Couperin
	Pavanne
	Bolero
	Mother Goose Suite
	Rhapsodie Espagnole
Respighi	Pines of Rome
Mussorgsky	Pictures at an Exhibition
Falla	The Three Cornered Hat
Copland	El Salon Mexico
	Piano Variations
	Appalachian Spring
	Billie the Kid
Imbrie	Concerto for Violin and Orchestra
Ives	Piano Sonata
	Symphony No. 2
Britten	Variations on a Theme of Frank Bridge for Orchestra
Hindemith	Music for Singing and Playing by Amateurs and Friends of Music
	Sonata for Harp
	Symphony for Concert Band in B♭
	Mathis der Mahler
Dukas	The Sorcerer's Apprentice
Berg	Lyric Suite

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*The composer of the selection is listed unless the designation (p) follows the name. In this case the name identifies the performer.

TABLE 2. MUSICAL SELECTIONS USED IN THE EXPERIMENTAL STUDY

Performer or composer*	Title
Bartok	Roumanian Polka
	Swineherds Dance
	Concerto for Orchestra
	Mikrokosmos
Cage	Amores
Gilbert	Dance in the Place Congo
Luenings	Fantasy in Space
Nin-Culmell	Variations on a Theme by Milan
Piston	Symphony No. 3
Martinu	Symphony No. 4
Sessions	Symphony No. 1
Milhaud	A Frenchman in New York
	Concerto for Percussion and Small Orchestra
Russell	Three Cuban Pieces
Roldan	Ritmacas
Schoenberg	Transfigured Night
	Three Piano Pieces, op. 11
Stravinsky	The Rite of Spring
	Concerto for Piano and Wind Orchestra
	Concerto for Violin
	Cappriccio for Piano and Orchestra
	Elegie
	Octet for Wind Instruments
	Circus Polka
Varese	Poeme Electronique
VOCAL MUSIC	
Marshall	Nero Nerak
Slim, Memphis (p)	Sunrise
	John Henry

TABLE 2. MUSICAL SELECTIONS USED IN THE EXPERIMENTAL STUDY

Performer or composer*	Title
White, Josh (p)	In the Evening
Schoenberg	Pierrot Lunaire
----	Missa Luba
JAZZ AND JAZZ-RELATED MUSIC	
Armstrong (p)	Saint Louis Blues
Basie	One O'Clock Jump
Gershwin	Concerto in F Porgy and Bess An American in Paris Cuban Overture
Fanta (p)	Sunday in New York Sister Sadie A Taste of Honey When Johnny Comes Marching Home
Hackett (p)	Jitterbug Waltz
Patterson (p)	When Johnny Comes Marching Home
Marshall	Nero Nerak Free Spirit Aneantissement
Ravel	Concerto for the Left Hand
Shepp (p)	Steps Unit Structure
Slim, Memphis (p)	Sunrise John Henry
Smith (p)	When Johnny Comes Marching Home
White, Josh (p)	In the Evening

Nine Bernstein tapes were used in this experiment. Short descriptions of these tapes may be found in the Appendix. Each tape has a running time of approximately one hour. One tape, given in two half-hour segments on alternate days, was presented each week for nine weeks. Since the purpose of a control listening curriculum was to control content as well as the influence of the tape recorder, a special effort to use tapes having only pre-twentieth century art music was made.

The Instrument of Evaluation

The Kyme Test of Aesthetic Judgments in Music (pre-instruction and post-instruction scores) constitutes the principal tool for evaluation in this study. It was administered the week prior to the experiment, and during the tenth week as a post-test. Kyme, in A Study of Musicality in the Junior High School and the Contribution of Musical Composition to this Development[10] constructed a test of aesthetic judgments in music. It has been standardized, and is sensitive to changes in aesthetic judgments in music at the junior high school level. The Kyme Test has been validated through correlations with teachers' estimates of success in music of their students. It has also been validated with teachers' ratings of the subjects as to musicality. Only those items which differentiated significantly between high and low achievers were retained in this test. The validity of the test, expressed as a correlation coefficient of test scores and teachers' ratings of these pupils, was .48. This correlation was obtained by using a rating scale of seven points and utilizing the scores of 1,048 students in the Kyme study, who represented a wide cultural spectrum. The reliability of this test of 53 items, determined by the Spearman-Brown formula, was .80. Nine additional items in contemporary music were included in the 62 item test used in this research. Unfortunately the addition of the nine contemporary items detracted from the reliability of the test. It was discovered that these items were not pulling in the direction of the first fifty-three items. The Kuder-Richardson formula[11] for test reliability shown below, yielded a reliability coefficient of .69, although the reliability of the first fifty-three items still remained at .80.

$$Y_{tt} = \frac{(K)}{K - 1}\left[1 - \frac{\sum_{i=1}^{K} S_i^{2}}{S_t^{2}}\right]$$

let Y_{tt} = the reliability of the test
let K = the number of items on the test
let S_i = the standard deviation of the ith test item
let S_t = the standard deviation of the test scores of N subjects on a test of N items; in this case, 326 subjects on a test of 62 items.

Substituting into this formula we find:

$$Y_{tt} = \frac{62}{61}\left[1 - \frac{13.8675}{44.2916}\right]$$

$$Y_{tt} = 1.01639\ (.6869)$$

$$Y_{tt} = .6981$$

This formula gives a good estimate of a lower boundary for the reliability coefficient of a test in the absence of test and retest experimental estimates.[12] According to this formula, the lower boundary of the reliability coefficient of the Kyme Test of Aesthetic Judgments in Music of 62 items, including contemporary music items, was computed to be .6981. The rather low value may be attributed to the fact that the contemporary items were not working for the common goal. Those subjects scoring high on the first fifty-three items scored low on the last nine.

Nevertheless, it was decided to use the contemporary items in this experiment because the investigator wanted to know the effect of a concentrated exposure of contemporary music on one's ability to make aesthetic judgments covering contemporary music as well as on the several musical styles covered by the Kyme test. The Kyme Test of Aesthetic Judgments in Music may be found in the Appendix.

Statistical Treatment of the Data

To test the hypothesis that there would be no significant difference among the four treatment groups, it was necessary to statistically equate the various samples on pre-test scores on this test. The statistical treatment of the data utilized was an analysis of covariance. This procedure takes into account the regression line and produces adjusted final test means for the experimental and control samples based upon the premise that the two samples were statistically equated on the first testing. F values were computed and then interpreted in relation to the degrees of freedom involved in the analysis.

FOOTNOTES

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2. Ed Salzman, "Students in Eastbay Get High Scores," Oakland Tribune (Feb. 27, 1968), 2.

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4. Bert Konowitz, "In Answer to--'Jazz: A Place In Music Education,'" Music Educators J. (Sept./Oct. 1964), 149.

5. Max T. Krone, "Jaxx and the General Music Class," Music Educators J. (June/July 1959), 23.

6. Harry Allen Feldman, "Jazz: A Place In Music Education," Music Educators J. (June/July 1964), 60.

7. Harry Goldberg, "How Can They Study Jazz Improvisation," Music Educators J. (Oct. 1961), 44.

8. A. L. Zeiger, "A Case for Jazz in the Classroom," Music Educators J. (Feb./March 1963), 139.

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CHAPTER IV - RESULTS

In the Spring semester of 1968, a curriculum in twentieth century art music was administered in five junior high schools in the San Francisco Bay Area. This experimental curriculum consisted of eighteen half-hour listening lessons, presented twice weekly for a period of nine weeks. These lessons were tape recorded so as to standardize the presentations and control extraneous variables. Each piece of music was presented for listening accompanied by brief comments.

In addition to the 226 students included in the experimental sample, 132 received a controlled listening program consisting of Leonard Bernstein and the New York Philharmonic Young Peoples Concerts. These lessons, also tape recorded, were presented twice a week for nine weeks. 201 students comprised the general music sample, and 38 subjects were included in a zero control sample not enrolled in music during this experiment. The numbers reported in the tables are somewhat smaller due to losses in matching of pre-and post-test scores.

The Kyme Test of Aesthetic Judgments in Music, which consisted of 62 paired items, was administered as pre-and post-instruction scores to the seventh grade students in the classes of the five participating junior high schools.

To test the hypothesis that there would be no significant differences among the four treatment groups, it was necessary to statistically equate the various samples on pre-test scores on this test. The statistical treatment of the data utilized was an analysis of covariance. This procedure took into account the regression line and produced adjusted final test means for the experimental and control samples based upon the premise that the two samples were statistically equated on the first testing. F values were computed which were then interpreted in relation to the degrees of freedom involved in the analysis. An F value of 3.84 is required for ∞ degrees of freedom to be significant at the 5 percent level.

Table 3 shows the results of the analysis of covariance, comparing the experimental classes in twentieth century art music with each of the control classes. From these findings it is evident that there is some difference among treatments after adjusting with covariates. Two totally integrated schools, A and C, had among the lowest adjusted mean scores for both experimental and control groups. Schools D and E, both nearly all Caucasian populations, scored much higher, with means ranging from 29 to 31 and 27 to 33 respectively. According to these test scores, in none of the experimental situations is there a significant difference in favor of the experimental curriculum at the 5 percent level.

Looking within at the Kyme Test, Table 4 shows test score means on items 4-50. These items emphasized works from the eighteenth and nineteenth centuries. The general music class of school E was the only class to improve significantly on these items when compared to either the experimental class or the control listening class in this school.

TABLE 3. Total Score, 4-65*

Sample	N	Pre-test Mean	Post-test Mean	Adjusted Mean	Standard Error	F Val.	Deg. of Free.	Signif. of Diff.
School A								
Experimental	19	25.5789	25.5789	25.5006	1.3380	.046	38	not sig.
Control (G.M.)†	21	25.3333	25.0952	25.1661	1.0784			
Experimental	19	25.5789	25.5789	25.1613	1.2016	.351	28	not sig.
Control (tape)‡	11	22.7273	25.6364	26.357	1.5907			
School B								
Experimental	13	25.1538	27.3077	27.7386	1.3723	.731	19	not sig.
Control (G.M.)	8	28.2500	30.3750	29.6749	1.7617			
Experimental	13	25.1538	27.3077	27.4559	1.5155	.000	28	not sig.
Control (tape)	17	25.7059	27.5294	27.4161	1.3251			
School C								
Experimental	14	26.5714	26.0714	24.6874	1.1266	.715	31	not sig.
Control (G.M.)	19	23.0526	24.9474	25.9672	.9601			
Experimental	20	27.9500	28.4500	28.3641	1.0366	.962	37	not sig.
Control (G.M.)	19	23.0526	24.9474	25.8310	.8402			
School D								
Experimental	18	29.2222	29.3889	29.2309	.9016	3.445	33	sig. at 5%
Control (N.M.)§	17	28.3529	31.4706	31.6379	.9278			
School E								
Experimental	13	29.6923	28,4615	27.4217	1.3668	7.009	23	sig. at 1%
Control (G.M.)	12	24.7500	31.7500	32.8765	1.4276			
Experimental	13	29.6923	28.4615	28.8236	.9365	11.788	32	sig. at 1%
Control (tape)	21	30.4762	33.1429	32.9187	.7364			

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* Items 1-3 were sample items and were not considered in the total score. † = General Music. ‡ = Bernstein taped lessons. § = No Music.

TABLE 4. Score 4-50*

Sample	N	Pre-test Mean	Post-test Mean	Adjusted Mean	Standard Error	F Val.	Deg. of Free.	Signif. of Diff.
				School A				
Experimental	19	20.8947	19.3158	19.2281	.9714	.064	38	not sig.
Control (G.M.)†	21	20.6190	18.8095	18.8889	.9240			
Experimental	19	20.8947	19.3158	18.7986	.9063	1.158	28	not sig.
Control (tape)‡	11	18.2727	19.5455	20.4388	1.2005			
				School B				
Experimental	13	20.4615	21.3846	21.6270	1.0269	.045	19	not sig.
Control (G.M.)	8	22.1250	22.3750	21.9812	1.3123			
Experimental	13	20.4615	21.3856	21.5199	1.2134	.098	28	not sig.
Control (tape)	17	21.0000	21.1176	21.0142	1.0609			
				School C				
Experimental	14	21.0000	20.0000	19.2451	1.0116	.040	31	not sig.
Control (G.M.)	19	19.1053	18.4211	18.9773	.8658			
Experimental	20	23.5000	19.5000	21.0050	1.9145	2.47	37	not sig.
Control (G.M.)	19	19.1053	18.4211	18.9773	.8658			
				School D				
Experimental §	18	23.9441	23.5556	23.4293	.7584	2.793	33	not sig.
Control (N.M.)	17	23.1765	25.1176	25.2514	.7804			
				School E				
Experimental	13	24.4615	23.1538	22.2628	1.1700	6.070	23	sig. at 1%.
Control (G.M.)	12	20.5000	24.0833	25.0486	1.2213			
Experimental	13	24.4615	23.1538	23.0418	.7834	2.529	32	not sig.
Control (tape)	21	24.2381	25.4286	25.4979	.6164			

[*] Items 1-3 were sample items and were not considered in the total sub-score. † = General Music. ‡ = Bernstein taped lessons. § = No Music.

Table 5 shows test score means in items 51-65. These items dealt with contemporary art music, and included works by composers such as Cowell, Milhaud, and Bartok. Here we notice that the scores of the pre- and post-testing of the experimental curriculum improve from .1 to 2.1 points. However, the control samples also improved approximately in the same range. The control classes, both general music and listening, of school E were the only classes that improved significantly on these items when compared to the experimental group in this school.

To evaluate the effects of taking the test twice, a zero control group was tested at school D. The pre-test mean for the 17 students was 28.35. The post-test mean was 31.47. In school C the pre-test mean for 106 randomly selected students not enrolled in music classes was 23.56. The post-test mean for this zero control group was 23.61.

TABLE 5. Score 51--65

Sample	N	Pre-test Mean	Post-test Mean	Adjusted Mean	Standard Error	F Val.	Deg. of Free.	Signif. of Diff.
				School A				
Experimental	19	4.6842	6.7368	6.7374	.4330	.573	38	not sig.
Control (G.M.)[†]	21	4.7143	6.2857	6.2852	.4119			
Experimental	19	4.6842	6.7368	6.7511	.4507	.844	28	not sig.
Control (tape)[‡]	11	4.4545	6.0909	6.0663	.5927			
				School B				
Experimental	13	4.6923	5.9231	5.9231	.6110	.363	28	not sig.
Control (tape)	17	4.7059	6.4118	6.4118	.5343			
Experimental	13	4.6923	5.9231	5.8692	.5392	.693	20	not sig.
Control (G.M.)	8	6.1250	8.0000	8.0872	.7047			
				School C				
Experimental	14	5.5714	6.0714	5.6540	.4715	3.207	31	not sig.
Control (G.M.)	19	3.9474	6.5263	6.8339	.3957			
Experimental	20	5.1000	6.2000	5.8930	.4702	3.296	37	not sig.
Control (G.M.)	19	3.9474	6.5263	6.3472	.3841			
				School D				
Experimental	18	5.2778	5.8333	5.8201	.4158	.839	33	not sig.
Control (N.M.)[§]	17	5.1765	6.3529	6.3669	.4279			
				School E				
Experimental	13	5.2308	5.3077	5.1450	.5283	12.022	23	sig. at 1%
Control (G.M.)	12	4.2500	7.6667	7.6667	7.8429			
Experimental	13	5.2308	5.3077	5.5302	.4355	13.120	32	sig. at 1%
Control (tape)	21	6.2381	7.7143	7.5765	.3383			

† = General Music. ‡ = Bernstein taped lessons. § = No Music.

CHAPTER V - CONCLUSIONS AND INTERPRETATIONS

The purpose of this experiment was to design and evaluate a listening program in twentieth century art music for seventh graders. The need for such a study was indicated by recent research and the views of leaders in music education. There has been an increasing awareness of the importance of instruction for effective listening, and the desirability of using twentieth century music has been suggested.

The experiment consisted of a pattern of pre-testing, training, and post-testing of four treatment groups. The four treatment groups were: (1) the experimental group which received guided, taped listening lessons to twentieth century art music designed by the experimenter; (2) the control listening group which was exposed to Leonard Bernstein taped listening lessons, exclusive of twentieth century art music; (3) a control group not experiencing a guided listening experience but, rather, the regular content of the general music classes, and (4) the zero control group which was used as a baseline to assess the amount of change in aesthetic judgments which might result merely from the passage of time, contempornaeous events, maturation, and other factors. Stated in the null form, the hypothesis tested was:

> There will be no significant differences among the four treatment groups.

Thus, the experiment provided for comparisons not only between the listening programs and the traditional general music classes where no listening program was taught, but also between the two listening curricula: the experimental program which contained only twentieth century works, and the Bernstein lessons which excluded twentieth century compositions and emphasized music of the past.

The experimental design of this study was developed on two assumptions. The first was that music appreciation could be attained through teaching listening skills. The evidence suggested that classes so taught did improve somewhat in aesthetic sensitivity. However, the selection of music listening as a topic for this study does not imply that listening to recorded music is the only approach to musical understanding. On the contrary, listening to recordings is an imperfect substitute for live performance. From the data presented in this research (see Table 3) it would appear that listening was an inadequate replacement for actual participation. General music classes treated as control samples were equally successful. Although in actual practice listening makes up an important segment not only of music education but also of our lives, listening appeared to be a passive "second-hand" technique compared to performance.

The second assumption in this experiment was that the use of works from twentieth century art music as a means of understanding all music might be more appropriate for the junior high school level than other approaches. The twentieth century art music lessons attempted to bring about cognitive learning in music through discussion and hearing of representative works from this period.

It was the hypothesis of this study that knowledge gained through a study of contemporary music would generalize to other kinds of music. In chapter I, two questions were raised:

> (1) Will directed listening to one kind of music, i.e., twentieth century art music, presented to junior high school students facilitate their understanding of other music, e.g., nineteenth century music?
>
> (2) Will there be a significant growth in musicality due to transfer of training which will be reflected by the ability to make aesthetic judgments concerning music of other periods?

As we can see from Table 3, this was not found to be true. There is evidence that the training from a guided listening program in contemporary music does not transfer to music of the past. The total growth that occurred from pre- to post-testing in the experimental group (see Table 5) was due to improvement in scores on contemporary music items. While the hypothesis was not confirmed, the effect of teaching contemporary music was, apparently, to make students aware of contemporary music. It appears that there was little transfer of training from an exposure to contemporary music to music of the Baroque, Classic, or Romantic periods. While teachers of general music might not wish to have an entire course of contemporary music alone, it nevertheless appears that for specific understanding of twentieth century music a section on this music would be helpful.

The greatest gains in the experimental program were made in the inner-city schools (B and C) that might be classed as "deprived" (see Table 1). The twentieth century art music program did not appear to be effective with the high socio-economic group. In school E, the humanities program of the general music class and the control group which used the Bernstein tapes had significantly higher test scores than the experimental group. However, in the lower socio-economic schools, there were no significant differences between the experimental and the Bernstein lessons.

The lack of change between pre- and post-test means in school A might be due to the fact that midway in the course the teacher had an emergency operation and a substitute who had never taught before was called in. Although the listening program was pre-taped, it was possible that the routine of teaching, including maintaining discipline in an inner-city school, might have been somewhat stressful to a new teacher and her anxieties may have been transferred to the students.

The correlation between the socio-economic level of the individual child and the total test score was extremely low.

Looking again at Table 3, we see that the highest adjusted mean scores were found in the two all white schools (D and E), and ranged from 27.4 to 32.9. The range in the inner-city schools was 24.6 to 29.6. Considering the socio-economic status and parental education of these populations (see chapter III), these results are, perhaps, not surprising.

It is possible that students from these middle-class schools possess recordings in their homes that are like the Kyme test of Aesthetic Judgments.

The greatest gains in the experimental curriculum test scores were made by the youngest teachers who might be described as more open to new ideas and experimental curricula.

One interpretation of this experiment is that music education in the public schools, at least up to the seventh grade, teaches a conformity which contemporary composers do not represent.

The principal differences between the experimental program and the general music programs were these:

1. There was a listening program in the experimental group.
2. There was more involvement by the teachers and students in the general music situation than in the experimental situation.
3. There was a difference in the music presented: no twentieth century music was presented in the general music classes.

All of these may not be neglible factors in accounting for differences in the test scores. The writer has no way of judging the comparative causal weight of these several factors influencing the subjects' growth.

The investigator met weekly with each teacher during the period of the experiment to distribute materials and to confer on the lessons. In addition, the experimenter conducted in depth interviews with participating teachers after the experiment had been concluded and the results tabulated. The classroom teachers evaluated the experimental design as they saw it affect their classes. Several of their observations recurred with high frequency. Based on their testimony, it appears that the fact that the test was taped and the lessons of the twentieth century art music curriculum were also on tape had adverse effects from the point of view of attentive listening and motivation in the final testing situation. All teachers reported that the students in the listening classes, experiencing a great deal of exposure to the tape recorder, resented the two-day duration of the final taped test even more than their other students experiencing a general music situation with attendant varied activities, such as singing or composing. In school D, where a zero control group was feasible (see Table 3), this group increased their score while scores from students from the same school, who received the taped experimental curriculum, remained the same. This comparison was significant at the 5% level. This may suggest that either heavy dependence on taped lessons and/or heavy dependence on twentieth century music actually inhibited the growth of the child, or had negative effects on his growth in musicality, resulting in low test scores. These findings are in contradiction to those of Kyme.[1] Kyme found in his study that students in a zero control sample tended to score the same or lower on the test the second time it was given.

Although somewhat speculative in terms of teacher testimony of student attention, it appears from this experiment that "canned" programs were less effective than teacher taught programs. In general, students reacted favorably to the music and content covered on the tapes. However, all teachers felt that the students often became bored with the routine of taped lessons. They believed that the use of an all taped program may have damaged the positive reactions of students toward the content of the lessons. Passive learning in music seemed not to be as effective as modes of learning that called for participation and ego involvement. The general music classes were taught by the teacher directly with a great deal of student-teacher interaction. The contemporary music program, on the other hand, being entirely on tape, was a second-hand experience. The teacher's personality and student-teacher interaction were considered very important elements in learning. Future experimentation could involve the teacher presenting the explanatory material from an outline or from memory, using the tape recorder only for musical examples. While this would introduce a greater teacher variable, it would allow for greater involvement of the teacher and influence of his personlaity upon the subject, and might counteract the seeming negative effects of a total taped listening experience.

All participating teachers reported the need for class activities of some type while the tapes were being played. The need for visual materials, such as film strips, was stressed. Future research could incorporate such materials, and have worksheets or quizzes on a regular basis.

In chapter I the question was raised as to whether young students have an ear for twentieth century art music and find it compatible in a way that the adult, mature, "set" ear does not. There is some evidence disconfirming an aspect of this hypothesis. Teachers observed that attention was particularly hard to sustain in atonal, impressionistic music, and in works by Charles Ives. However, with these exceptions, teachers reported that students, in general, reacted favorably to the music and content covered in the taped lessons. In particular, the greatest student response was to jazz, percussion music, and the lesson on "New Sounds" which included electronic music. The writer believes that concrete evidence of student preferences for the various styles within twentieth century art music would be helpful. In future research this might take the form of a preference inventory which could be administered immediately following the conclusion of the experiment and at three and six month intervals to assess carry-over effect of the experiment on student preference.

Lessons with a great deal of piano music were less successful than lessons with a variety of orchestral timbres. This evidence appeared to confirm studies by Bauman[2] and Gatewood[3] who suggested that the comprehension of different instrumental qualities was a function of maturation. It did appear that some music was more appropriate for this age group than other music. Gatewood presented evidence that the sound of wind instruments was more enjoyable than the stringed instruments to youths of ten to fourteen. Teacher observations confirmed this fact, adding the observation of student disinterest in piano music. The investigator postulates that a new design with a greater emphasis on the wind and percussion orchestras commonly found in twentieth century music, more inclusion of jazz, which also has a high degree of wind and percussion instrumentation, and electronic music might meet with greater success than did this experimental design.

Research by Gilliland and Moore,[4] Gatewood,[5] and Getz[6] found that it is the rhythm that first attracts the listener's spontaneous attention. Teacher observations confirmed this finding. The highly rhythmic nature of jazz, of percussion music, of certain works by Bartok and Stravinsky, Gershwin, and Cage might account for the popularity of their compositions with the students. Similarly, the slow tempo and possible lack of rhythmic interest for the young student may, in part, account for the lack of popularity of works by the impressionists, Copland, Ives, Hindemith, Schoenberg and Berg in the classroom. Moreover, it appeared that it was difficult for this age group to listen for an extended period of time to these works.

The teacher of the upper-middle class school (School E) reported that serious jazz was an unfamiliar idiom to these seventh grade students, as unfamiliar as other serious modern musical styles. However, for the other four schools and particularly in the schools which might be described as "deprived," teachers observed that the use of jazz was one of the most successful aspects of the program. Response was positive and interest keen. The writer believes that the use of jazz in the classroom, particularly in schools drawing from lower-class populations, holds great promise, and has hardly been tapped. Further research is indicated.

It appeared that for this age level, it was hard for students to listen to music for a considerable period of time without more direct involvement. Short examples, i.e., those not exceeding three or four minutes, were good. The attention span of this age group is minimal.

The participating teachers had some specific suggestions for improvement in the lessons themselves.

1. Some of the vocabulary in the lessons was too difficult for this age group.

2. Musical terms were not beyond the understanding of this age group, but certain concepts could have been explained more fully and repeated in subsequent lessons. Specifically, some of these terms include: "syncopation," "neo-classicism," "polyphony," and "counterpoint."

The criticisms and suggestions above also applied to the Bernstein tapes. It was felt that the control listening program was too difficult for the students, and proceeded at too fast a rate for their comprehension.

In an effort to improve the reliability of the test and to reduce guessing, the students were told to mark their papers in the "A" column if they preferred the first rendition of a work, in the "B" column if they preferred the second, or in the "C" column if they thought both versions were the same. Since it is true that students marked the "C" column when they were in doubt, all "C" answers in this study were counted as wrong, and this contributed to the apparent low scores. The writer recommends more intense use of the four domains: melody, harmony, rhythm, and form, examined in this test. If a student can hear that two versions of the same piece are different, he should be required to state in what way he thinks they differ: in the rhythm, the melody, the harmony, or the form. A test of this type may be helpful for the designer of a music listening program as well as for the teacher of general music. It is probable that a majority of students can hear rhythmic fluctuations and changes. Many may be able to discern melodic differences. It was the author's observation that few can hear harmonic subtleties or variations in form. Further investigation might yield confirming results.

The contemporary music test items followed the usual pattern of comparing structural elements and their mutilations. However, the essence of contemporary music is not that it is harmonically "consonant" in the typical sense, but that new timbres and sounds themselves are essential. These were missing in the test.

A hypothesis worthy of further study holds that listening skills may take a longer time to develop than, for example, performing skills. When the prime means of instruction is a music listening curriculum, it is possible that nine weeks is too short a period for significant changes in the subject's musicality. The writer suggests that future research in music listening be of longer duration, spanning the semester or school year if possible.

The limitations of this study and the negative results concerning the transference of knowledge from a study of contemporary art music to music of the past suggest that this knowledge might also be tested after a period of time has elapsed. For example, subjects might be tested on the Kyme Test of Aesthetic Judgments in Music three or six months after being exposed to the experimental curriculum to measure effects of retention.

The various media of mass communication have concentrated the tastes and interests of this nation into a very few areas. Propaganda is constantly influencing and molding our interests and desires. The most susceptible recipients of this propaganda are the teenagers for whom acceptability and peer culture is of extreme importance. An interesting study might investigate the impact of television on the musical tastes of the young. Is there a proliferation of modern music, including jazz, in background scores, advertisements and programming? Or is there an abundance of "music of the past" on television? How does television affect the tastes and musicality of adolescents? Is the influence of television so great that no course in music can overcome it? Does the influence of television on the musicality of the young vary among socioeconomic populations? These are all questions worthy of further study.

The continuing quest for excellence in our music programs calls for action on many fronts simultaneously. No single experiment of this kind can, of course, be designed to disprove the hypothesis under investigation.

There is always a possibility that a change in procedure or content might, in fact, have obtained or obtain in the future, the hoped for result. Clearly, more research is needed in the area of music listening and in the use of twentieth century art music in a listening program. This exploratory research has suggested several avenues for future investigation.

1. Live teachers of the listening program in twentieth century music could be pitted against live teachers of the general music situation in an experiment. It appears that the experimental curriculum was somewhat at a disadvantage in the present study since the entire curriculum was tape recorded. All teachers felt that most students quickly became bored with the routine of taped lessons, and believed that, in general, the use of an all taped program may have damaged any positive reactions of students to the content of the lessons. The neglible amount of student-teacher interaction in the experimental program might be changed in future research to involve teacher presentation of explanatory material from an outline or from memory with minimum use of the tape recorder for musical examples.

2. Similarly, the lack of student participation in the experimental design suggests that the use of visual materials, such as film strips, quizzes or seatwork activities would be appropriate. An experimental design implementing activities of this type might be a worthwhile undertaking.

3. Teacher observation suggests that student interest was greatest with respect to jazz, electronic, and percussion music. While music education should not be based on existing taste of students, teacher understanding of student taste can improve teaching. A design with a greater emphasis on these types of music might have wider appeal for adolescents, and could possibly lead to greater learning. This investigation confirmed earlier research that found that the greatest response was to rhythm, and to percussion and wind orchestras, not to stringed instruments and piano timbres. Less emphasis on atonal, impressionistic music, and certain works by Charles Ives, Aaron Copland, and Paul Hindemith that seemed difficult for this age group and students reported as being too unrhythmic is suggested. Some measure of liking, such as a preference inventory, might be given to students immediately following the experiment, and three and six months later to assess the response to modern works concretely.

4. This study suggests that the use of serious jazz may be more successful with the lower socio-economic populations than with the upper socio-economic group. An investigation using a great deal of jazz in schools drawing on different socio-economic populations is recommended to confirm this result. Moreover, the significance of the effect of serious jazz selections on students' musical learnings should be studied in depth. The present study suggests that serious jazz can attract a high degree of interest but further study is necessary to identify styles of jazz which can best serve the overall objectives of the general music program.

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5. This study suggests that lessons with more humor, a simpler vocabulary, and more discussion in depth of concepts might meet with greater success with this age group.

6. It is possible that a taped test lasting two days is too long for the average attention span of seventh graders. A one day testing situation, presenting a condensed version of the Kyme Test of Aesthetic Judgments in Music is suggested as an evaluative procedure for further research. The elimination of the "C" or "same" column of the test, leaving just two alternatives for preference, has already been suggested.

7. A hypothesis worthy of further study is that listening skills may take longer to develop than performance skills. Future research in music listening might span a semester or school year rather than a nine week duration, as was the case in this experiment.

8. Some geographical areas and certain rural communities might have adolescents different from those tested in this experiment. Perhaps it might be wise to run the experiment in a variety of geographical areas.

9. A study of the impact of the mass media, particularly television, on the musicality of adolescents is suggested. Does the influence of television vary among different socio-economic populations?

These are all hypotheses worthy of further expansion. The author realized that different results might be obtained from a study similar to this one: one carried out by different teachers, with different groups of students, and a different choice of materials which still adhered to the requirements of this study. The results of no one experiment can be a panacea for all the problems of music teaching. However, there are valuable lessons to be learned from this experiment, and, even as constituted it affords some evidence of difficulties in introducing a listening program in twentieth century art music at the junior high school level.

FOOTNOTES

1. George Kyme, A Study of the Development of Musicality in the Junior High School and the Contribution of Musical Composition to this Development. U.S. Dept. of Health, Education, and Welfare: July 1967.

2. Victor Bauman, "Teen-age Musical Preferences," J. Res. Mus. Ed., VIII, No. 2 (Fall 1960), 75-85.

3. Esther Gatewood, "An Experimental Study of the Nature of Musical Enjoyment," The Effects of Music, ed. Max Schoen (New York: Harcourt, Brace and Co., 1927), ch. 5.

4. A. R. Gilliland and H. T. Moore, "The Immediate and Long Time Effects of Classical and Popular Phonograph Selections," J. App. Psychol. VIII (1924), 309-323.

5. Gatewood, op. cit.

6. Russell Paul Getz, "The Influence of Familiarity through Repetition on Determining Optimum Response of Seventh Grade Children to Certain Types of Serious Music" (unpublished Doctoral Dissertation, Penn. State Univ., 1963), Dissertation Abstracts: XXIV, 5450.

CHAPTER VI - SUMMARY

The goal of this research was to study the effects of a taped, guided listening program in twentieth century art music upon the understanding by junior high school students of other styles of music. The Yale Seminar stated that "the primary aim of music education throughout the grades is the development of musicality."[1] Musicality was defined as "the ability to express accurately through pitch and time the mental image of a musical idea. Conversely, it is the capacity to grasp in its completeness and detail a musical idea heard."[2] The latter definition, which included the ability to make aesthetic judgments, was used in this experiment.

Specifically, it was hypothesized that there would be no significant differences among the four treatment groups, namely, (1) the experimental group which would receive guided, taped listening lessons to twentieth century art music, (2) a control group which would receive Leonard Bernstein taped listening lessons, exclusive of twentieth century art music, (3) a control group consisting of general music classes which would not receive a guided listening experience, and (4) the zero control group which would not be exposed to musical instruction.

The experimental group was exposed to a guided listening program consisting of two half-hour lessons per week for nine weeks. Only twentieth century art music was presented, and all music and commentary was pre-recorded on tape. Each piece of music was presented for listening accompanied by brief comments. Well-known composers such as Bartok, Stravinsky, Hindemith and Schoenberg were included as well as more "experimental" composers like Cage, and jazz artists such as Fanta and Hackett.

The control listening curriculum consisted of nine Leonard Bernstein lecture-performance tapes of the New York Philharmonic Young People's Concerts. Since these were of an hour duration, each tape was divided into two half-hour listening segments presented each week for nine weeks. The general music classes received the regular content of their courses as prepared by the music teachers, and the zero control sample had no music instruction during this period. All tapes and tests were administered by the regular classroom teacher as a part of the course of study.

The instrument of evaluation for this investigation was the Kyme Test of Aesthetic Judgments in Music (pre-instruction and post-instruction scores). It was administered to each of the samples in the five junior high schools before the nine week instruction period and after the period of training. The test, which has been standardized, is comprised of 62 items which take 55 minutes to administer. The Kyme test has a validity of .48 and a reliability of .81.

To test the hypothesis, i.e., that there would be no significant differences among the four treatment groups, it was necessary to statistically equate the various samples on pre-test scores on this test. The statistical treatment of the data utilized was an analysis of covariance.

This procedure takes into account the regression line and produces adjusted final test means for the experimental and control sample based upon the premise that the two samples are statistically equated on the first testing. F values are computed which are then interpreted in relation to the degrees of freedom involved in the analysis.

Subjects for this investigation were drawn from five junior high schools in the Oakland, Piedmont, and Albany, public school systems. A total of 720 students participated in the experiment. Of these, 226 comprised the experimental classes devoted to music listening of twentieth century art music, 132 were assigned to the Leonard Bernstein listening program, 201 were in the general music classes, and 161 served as a zero control sample, not being enrolled in music during the semester of the experiment. The population represented a cross section of urban schools, including racially segregated neighborhood schools as well as schools totally integrated.

It was the hypothesis of this study that knowledge gained through a study of contemporary music would generalize to other kinds of music. The conjecture that there would be significant growth in musicality due to transfer of training which would be reflected by the ability to make aesthetic judgments concerning music of other periods was not supported by the findings. There was evidence that training from a guided listening program in contemporary music did not transfer to music of the Baroque, Classic, or Romantic periods. The total growth that occurred from pre- to post-testing in the experimental group was due to improvement in scores on contemporary music items. Although the hypothesis was not confirmed, the effect of teaching contemporary music was, apparently, to make students aware of contemporary music.

The greatest gains in the experimental program were made in the inner-city schools that might be described as "deprived." The twentieth century art music program did not appear to be particularly effective with the high socio-economic group.

The greatest gains in the experimental curriculum test scores were made by the youngest teachers who may be more open to new ideas and experimental curricula.

The classroom teachers evaluated the experimental design as they saw it affect their classes. Based on their testimony, it appeared that the fact that the test was taped and the lessons of the twentieth century art music curriculum were also on tape had adverse effects from the point of view of attentive listening and motivation in the final testing situation. All teachers reported that the students in the listening classes, experiencing a great deal of exposure to the tape recorder, resented the two-day duration of the final taped test even more than their other students experiencing a general music situation with attendant varied activities, such as singing or composing. This may suggest that either heavy dependence on taped lessons and/or heavy dependence on twentieth century music actually inhibited the growth of the child, or had negative effects on his growth in musicality, resulting in low test scores.

Although somewhat speculative in terms of teacher testimony of student attention, it appeared from this experiment that "canned" programs were less effective than teacher taught programs. In general, students reacted favorably to the music and content covered on the tapes. However, all teachers felt that the students often became bored with the routine of taped lessons. They believed that the use of an all taped program may have damaged the positive reactions of students toward the content of the lessons. Passive learning in music seemed to be not as effective as modes of learning that called for participation and ego involvement. An experimental design with greater student-teacher interaction might meet with more success.

Teachers reported that the greatest amount of student interest among the twentieth century works was in jazz, electronic music, and percussion music. The writer suggests that a more specific measure of student preferences, such as a preference inventory, be employed in future experimentation for more accurate assessment of student taste. This study suggests that the use of serious jazz may be more successful with the lower socio-economic populations than with the upper socio-economic group. An investigation using a great deal of jazz in schools drawing on different socio-economic populations is recommended to confirm this result.

This investigation confirmed earlier research that found the greatest response of subjects was to rhythm and to percussion and wind orchestras, not to stringed instruments and piano timbres. Teachers observed that student interest was lowest with respect to atonal and impressionistic music, and to certain works by Charles Ives, Aaron Copland, and Paul Hindemith that students reported as being too unrhythmic.

No single experiment of this kind can, of course, be designed to disprove the hypothesis under investigation. There is always a possibility that a change in procedure or content might, in fact, have obtained or obtain in the future, the hoped for result. Nevertheless, this exploratory research affords some evidence of difficulties in introducing a listening program in twentieth century art music at the junior high school level.

FOOTNOTES

1. Claude V. Palisca, Seminar on Music Education, Cooperative Research Project No. G-013. (Yale University, New Haven, Conn., 1963), 6. The research reported herein was supported by the Cooperative Research Program of the Office of Education, United States Department of Health, Education and Welfare.

2. Ibid.

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APPENDIX A

The Twentieth Century Art Music Curriculum

The Twentieth Century Art Music Curriculum

The following are tape transcriptions of the eighteen lessons in the experimental curriculum in twentieth century art music. Each lesson is equivalent to one half-hour of commentary and music.

LESSON 1 - IMPRESSIONISM

We are going to begin a study of twentieth century music. In this short course we will hear music by composers of many nationalities: the Hungarian Bela Bartok, the Russian Igor Stravinsky, the Americans Charles Ives and Aaron Copland. We will hear music in many different styles--such as jazz, electronic music, and twelve-tone music. We are going to begin our study of twentieth century music with music called Impressionism.

Impressionistic music, written at the turn of the century, seeks to leave an impression of something with the listener. Listen to this first work called "Reflections in the Water" by Debussy. Do you think Debussy is successful in painting a picture of a water scene with outlined figures in the water and shimmering reflections?

**REFLECTIONS IN THE WATER, Claude Debussy

Debussy was a French composer who died about fifty years ago. In comparison with "classical" music, his music was new and different. With the idea of painting pictures in music, he started a whole new idea in music which has become very popular with serious composers. One of his most famous piano compositions is "Clair de Lune" which we will hear next. Notice that Debussy used a great variety of chords and changes of key, giving the ear the impression of hearing several tonalities simultaneously. Here is "Clair de Lune."

**CLAIR DE LUNE, Claude Debussy

Debussy's contribution to piano literature is really outstanding. He became concerned with color, atmosphere and mood. His music seems to hint rather than to state--Impressionistic music is vague. How did Debussy accomplish impressions and vagueness? Well, he evolved a harmonic language of his own. One way was by using parallel chords--chords which were played side by side, like this **, rather than the old way, back and forth, like this **. Debussy treated chords as units that could be arranged in succession. With this new usage of chords, their older tonality-fixing function was weakened. Before, music had a resting place--a tonic or Do which was fixed by chords. Now, with parallel chords, it became difficult to tell where Do was. Debussy looked on the chord as a color medium that could be independent of anything that came before or after it. Listen for the parallel chords in this next selection, the "Sunken Cathedral."

**SUNKEN CATHEDRAL, Claude Debussy

We could hear parallel chords--chords going side by side rather than back and forth, at the beginning. This parallel motion was evident in other places in this work too. Preoccupation with isolated sounds and with new color effects became characteristic of this new Impressionistic music. Debussy's treatment of the individual chord as an end in itself was a break with tradition.

Music that tells a story is called Program music. Program music is suggested by non-musical ideas. It could be in the Impressionistic style, or in some other style. Here, the story or program of "Sunken Cathedral" is not concretely reproduced, but is suggested--for Impressionistic music is somewhat elusive, and Debussy's music seems to hint rather than to state. The program for this piece is a mystic representation of an old Breton legend which told that on clear mornings, when the sea was transparent, a cathedral would rise to view. Do you think Debussy was successful in painting a picture of this old cathedral? Listen for the distant tolling bells as we hear "Sunken Cathedral" in its entirety.

**SUNKEN CATHEDRAL, Claude Debussy

In 1908 Debussy wrote a suite for the piano for his four-year-old daughter. It was called the Children's Corner. In Baroque music, a suite was a series of movements, each in the character of a dance, and all in the same key. In modern times, however, as with the Children's Corner, a suite is often just a succession of different pieces. The next selection, from the Children's Corner suite, reflects Debussy's sense of humor. It is called "Doctor Gradus Ad Parnassum," and is meant to suggest the struggles of a child with piano exercises.

**DR. GRADUS AD PARNASSUM, Claude Debussy

The last movement of this suite, "Golliwogg's Cakewalk," reveals Debussy's interest in American popular music. A cakewalk and this style of music was popular in America fifty years ago. Here is "Golliwogg's Cakewalk."

**GOLLIWOGG'S CAKEWALK, Claude Debussy

Debussy left us a body of works marked by shimmering beauty, vague filmy atmospheric effects, and hushed, delicate tints rather than solid bold colors. Although he died only thirty years ago, Debussy's music is played almost as much today as that of older and more famous composers.

Ravel, one of Debussy's French contemporaries, was more content to work in classical forms than Debussy. For example, Ravel's suite, Le Tombeau de Couperin, really is a suite of dances--not just a series of movements. While the chords sound modern, can you hear that these chords are more clear-cut than Debussy's--glittering rather than hazy?

**RIGAUDON, Maurice Ravel

That was the first section of the "Rigaudon." It is a lot to remember, but you can tell it from the next section which is much quieter. This section consists of a treble part over a drone bass or pedal point. A pedal point means a low note in the bass which is repeated or held a long time. The name drone comes from the drone of the bagpipes. Listen for this drone or pedal point in this section.

**RIGAUDON, Maurice Ravel

Then the first section is played again, and the piece is completed.

**RIGAUDON, Maurice Ravel

By contrast, Debussy's compositions were so fluid, it would have been hard to identify different sections. Now let's hear this piece in its entirety.

**RIGAUDON, Maurice Ravel

The literature of the piano has been considerably enriched by both Debussy and Ravel. Their compositions abound in colorful passages based on new concepts of sonority. They brought to the piano colors it had not known before. The changes, particularly harmonic changes, they introduced, link them with a later epoch. Their influence and the effects of Impressionism were and are felt everywhere. Their works bridge the gap between the older style of music and twentieth century music.

**PAVANNE, Maurice Ravel

LESSON 2 - IMPRESSIONISM

Today we are going to talk more about Impressionistic music. Here is a piece by Debussy, the French composer, which paints a picture. The name of the piece is "Clouds," and in it Debussy is showing us a musical picture of clouds. Picture yourself on a warm summer day--out in a park, lying on a hillside of beautiful green. It is warm and lazy in the sun, but a slight breeze keeps you from getting too hot. The grass is waving gently in the breeze, and you can hear the occasional buzzing of a bee or a cricket in the distance--but nothing seems to bother you. You look up and see a beautiful blue sky with white fleecy clouds floating lazily by. Once in a while you try to make animals or faces out of the clouds. Now and then the sun goes behind a cloud for a few seconds and you follow its shadow on the hills. Sit back and let your mind wander as we hear the musical portrayal of "Clouds."

**CLOUDS, Claude Debussy

What is Impressionism? Impressionism was the artistic movement of the late nineteenth and early twentieth centuries. The term is borrowed from painting, indicating the close relationship of contemporary trends in the various fields of art. Painters were turning away from a photographic representation of what the eye actually sees and were more concerned with color and light than with form and substance. To these artists, the subject matter was of less importance than the impression the subject aroused--in both music and painting--the artist or composer was less concerned with detail and precision than on presenting a subject or object as he saw it. By now you should be able to express in your own words what you think Impressionism is. Let us hear Afternoon of a Fawn, a beautiful work, also by Debussy. Here Debussy is not trying to give us a literal picture of a subject, but is suggesting his impression of it.

**AFTERNOON OF A FAWN, Claude Debussy

Debussy was at the axis and center of the new French music, and he influenced many other composers. The Italian composer, Respighi, was influenced by Impressionism. The next work we are going to hear is called the Pines of Rome. It is by Respighi, and is in the Impressionistic style.

**PINES OF ROME, Ottorino Respighi

Could you hear the live bird calls in this work? This composition is probably the first to utilize a phonograph record as a part of the instrumentation. A recording of the song of an actual nightingale in the closing part of the third movement accompanied by trills of muted violins and harps creates a lovely impression. Listen again.

**PINES OF ROME, Ottorino Respighi

Next, let's hear part of a work by Russian composer Mussorgsky called Pictures at an Exhibition. Here Mussorgsky depicts himself walking around at an art exhibition--suddenly attracted to one picture, then to another. Pictures at an Exhibition was written after Mussorgsky viewed an actual exhibition of works by an artist called Hartmann. The first selection is called "Promenade."

**PROMENADE, Modest Mussorgsky

One picture by Hartmann that Mussorgsky viewed was the "Marketplace at Limoges." In setting his impression of this painting to music, Mussorgsky, like the artist, gives us his idea of the bustle and noise of the crowd, disputes between vendor and customer, both equally shrill-voiced. A violent argument brings us to the first chord of the succeeding number. Here is Mussorgsky's impression of a busy marketplace.

**MARKETPLACE AT LIMOGES, Modest Mussorgsky

Probably the most famous Impressionistic composer other than Debussy was Maurice Ravel, who lived from 1875 to 1935. You remember that we defined program music as music that is inspired by a non-musical idea--music with a program or story--such as Pictures at an Exhibition, or "Sunken Cathedral." An example of fine program music is Ravel's Mother Goose Suite. This charming music is based on a set of fairy tales. The music begins with the "Pavan of the Sleeping Beauty," which establishes the make-believe mood of the music.

**PAVAN OF THE SLEEPING BEAUTY, Maurice Ravel

The second section tells of "Hop-'o My Thumb," a character who goes wandering in the forest, leaving a trail of bread crumbs so that he will be able to find his way out. However, he finds to his dismay that the crumbs he has scattered on the path have been eaten by birds. Here is this excerpt from the Mother Goose Suite.

**HOP-'O MY THUMB, Maurice Ravel

Ravel was influenced by Spanish music. He was born in France near the Spanish border. He wrote several compositions that show the influence of the folk and popular music of Spain. We are going to hear an excerpt from Ravel's Bolero. It is said that the idea for Bolero came when the composer could not sleep because of the rhythm of saws in a mill near his home. Sitting down at the piano, where he composed, he turned the distraction into the invention of this piece. Here is Ravel's Bolero.

**BOLERO, Maurice Ravel

Another composition by Ravel showing the influence of Spain with the typical rhythm of the habañera, a Spanish dance, is Rhapsodie Espagnole, composed in 1907 over sixty years ago.

**RHAPSODIE ESPAGNOLE, Maurice Ravel

The rhythms and castanets make these examples sound Spanish. Debussy wrote a very Spanish-sounding piece called Iberia. In his entire lifetime, Debussy spent only a few hours in Spain--this when he went to watch a bullfight. I think you'll agree, however, that in Iberia he captured the letter and spirit of Spanish music, and expressed it vividly.

**IBERIA, Claude Debussy

Ravel's and Debussy's Spanish-sounding music is a sort of nationalistic music, even though both composers were French. Nationalistic music emphasizes certain national aspects of music of a given country, drawing on native folk songs and dances, incorporating them into a composition. Next, here is a real Spaniard writing a work influenced by Spain. The work is by Falla, called The Three Cornered Hat. Listen for the castanets and vivid rhythms.

**THE THREE CORNERED HAT, Manuel de Falla

Aaron Copland, an American, wrote El Salon Mexico after a visit to Mexico in 1932. This work was written in 1936, and captured the spirit and sound of Mexico.

**EL SALON MEXICO, Aaron Copland

LESSON 3 - NATIONALISM

Last time we talked briefly about nationalism in music. Nationalistic music is music which is characterized by a strong emphasis on the national aspects of a country's music. This emphasis is achieved by drawing on the native folk songs and dances of the composer's country, and incorporating them into a work literally or in a free manner. Last time we heard many Spanish-sounding works by composers Debussy, Ravel, Falla, and Copland. Let's begin our lesson today by listening to a work by Villa-Lobos. From what country do you think Villa-Lobos came?

**LITTLE TRAIN, Heitor Villa-Lobos

Villa-Lobos is from Brazil, and in this work he uses lots of instruments native to Brazil and to South America: guiros, which are gourds with the scratchy sound, maracas, Cuban rattles, and a variety of others. These instruments plus the Brazilian samba beat identify this music as South American--Brazilian. Let's turn to the United States and hear a work by Copland called Appalachian Spring. It was written in 1944, and the scene is rural Pennsylvania.

**APPALACHIAN SPRING, Aaron Copland

Another very American sounding work by Copland is Billy the Kid. Here the loneliness of the western prairie is depicted.

**BILLIE THE KID, Aaron Copland

American composer, Andrew Imbrie, wasn't born until 1921--a year when many composers, such as Debussy, Ravel, and Mussorgsky had already composed a great deal of music. At present, Imbrie is living and teaching at the University of California at Berkeley. A concerto is a work for solo instrument and orchestra. Here is a portion of Imbrie's Concerto for Violin and Orchestra.

**CONCERTO FOR VIOLIN AND ORCHESTRA, Andrew Imbrie

Other music readily identifiable as American is Gershwin's Concerto in F. Notice the jazz elements and strong rhythms in this work that mark it as American. The solo instrument in this concerto is the piano.

**CONCERTO IN F, George Gershwin

Gershwin was also a composer of musical comedies. Many of the fine popular songs the jazz artist plays come from his musicals. Gershwin wrote the first Negro folk opera, Porgy and Bess. Perhaps some of you have seen the movie "Porgy and Bess." It is well worth viewing. Here is an excerpt from Porgy and Bess.

**PORGY AND BESS, George Gershwin

Many composers of the twentieth century have used jazz in their compositions. Let's hear a part of Gershwin's An American in Paris. First performed in 1924, this work is for piano and orchestra. This music reflected jazz of the twenties--brash, vital, jaunty. Listen for the elements of jazz in An American in Paris.

**AN AMERICAN IN PARIS, George Gershwin

LESSON 4 - AMERICAN MUSIC: JAZZ

**AN AMERICAN IN PARIS, George Gershwin

That was An American in Paris by George Gershwin. Last time we talked about nationalism in American music. One thing that makes American music sound American is the use of jazz. Gershwin was one composer who used jazz in his compositions. He only lived to be thirty-nine--a loss for American music--all too short a career.

Jazz has endured in symphonic works, like those of Gershwin, and as jazz. Let's take a look at this jazz that has so attracted composers of this century. Here is an example of jazz played by the Karen Fanta trio.

**SISTER SADIE, Karen Fanta Trio

That's jazz, and jazz, like all music, is composed of three basic elements: melody, rhythm, and harmony. Most of you would probably feel that the rhythm is very strong in jazz--in fact, it's probably the most noticeable element of jazz. What makes the rhythm of jazz special? Something called syncopation. Syncopation means either the placing of an accent where we least expect one, that is, accenting a weak beat, or the taking away of an accent where we expect one--removing an accent from a strong beat. In either case, there is the pleasurable element of surprise. Are there any accents on the weak beats, any syncopation in this jazz composition?

**SISTER SADIE, Karen Fanta Trio

Yes, there was syncopation. The string bass was carrying the pulse, playing steady beats, and the piano and drums played syncopated rhythms. Is there any syncopation in this Dixieland jazz played by trumpeter Bobby Hackett?

**JITTERBUG WALTZ, Bobby Hackett Sextet

There was syncopation in Mr. Hackett's recording of "Jitterbug Waltz." The special rhythmic "jerkiness," common in jazz, that we feel is syncopation. Syncopation is an aspect of rhythm.

We can see the importance of the Negro in music wherever he has settled--jazz and blues in America, calypso in Jamaica, and in Africa, the cradle of jazz, we can hear strong rhythms even in this choir singing church music!

**MISSA LUBA

Let's hear another excerpt from this choir. Notice the call and response: one person will sing, then others will join in a response.

**MISSA LUBA

That's not exactly jazz, but it certainly shows us where jazz came from--the strong rhythms are surely evident, and the feeling is similar to that of jazz. Jazz was born of the Negro culture coming into contact with the white culture here in America. Some say jazz was born in New Orleans, others Chicago. Now jazz has spread around the world. Many regard it as America's original contribution to music.

The importance of the Negro in the history of jazz cannot be underestimated. One of the early forerunners of jazz was the blues, first sung by Negro slaves in the cotton and tobacco fields where they toiled. Listen to this old blues.

**IN THE EVENING, Josh White

Many blues tell a sad story. Others are just fun--humorous poetry set to music. The blues are true folk music. This next blues is somewhat faster in tempo than the last. Tempo refers to the rate of speed at which a composition is performed.

**JOHN HENRY, Memphis Slim

The blues have influenced jazz, and as a form of music are still widely played. Here is a blues for big band played by the Count Basie Orchestra.

**ONE O'CLOCK JUMP, Count Basie Orchestra

Next time we will talk more about jazz and hear symphonic works that have elements of jazz. To conclude, here is a blues in a style of jazz played in the twenties called "Dixieland." The trumpeter is one of the most famous jazz performers of all time, Louis Armstrong.

**SAINT LOUIS BLUES, Louis Armstrong Sextet

LESSON 5 - JAZZ

**SUNDAY IN NEW YORK, Karen Fanta Trio

That's jazz. Last time we learned a bit about the roots of jazz in Africa, and heard some early blues. Jazz is a music uniquely American. It was easy to hear the strong rhythms and syncopation in that example. The instruments we heard were the piano, string bass, and drums. The tempo was fairly fast. But some jazz is quiet. Listen to this example.

**A TASTE OF HONEY, Karen Fanta Trio

There are many different combinations of instruments possible in jazz. Can you identify this combination?

**WHEN JOHNNY COMES MARCHING HOME, Don Patterson Trio

We heard the tenor saxophone, drums, and organ. The organ is an electronic instrument, and the bass notes are played, not on a string bass, but on the low pedals of the organ by Mr. Patterson's foot. Listen.

**WHEN JOHNNY COMES MARCHING HOME, Don Patterson Trio

Judging from the fast tempo of that piece, we realize Mr. Patterson has a pretty nimble foot! Now let's hear some symphonic music that is greatly influenced by jazz. Here is a work called Nero Nerak by American composer, Paul Marshall. This work was performed by a group of young high school students. It opens with a blues, and the bass and drums keep time, playing the steady beats as usual. Here is the first section of Nero Nerak.

**NERO NERAK, Paul Marshall (used by permission of the composer)

Notice the unusual sound of a chorus chanting to the music towards the end of this work.

**NERO NERAK, Paul Marshall (used by permission of the composer)

Years ago Marshall played jazz piano in small combos. Then he went to the University and studied music theory and composition. He now teaches junior high school students music in New Jersey. Here is another of his symphonic compositions in which he freely uses jazz. This work is quite lovely, and opens with a soaring violin melody.

**FREE SPIRIT, Paul Marshall (used by permission of the composer)

Even foreign composers have been attracted by jazz. Jazz was very much on Ravel's mind in the 1930's. He admired Gershwin and was fascinated by Gershwin's experiments to bring jazz elements to the forms of classical music. The next work we are going to hear has many jazz effects. It is a concerto for piano and orchestra written in 1931. This concerto was composed specifically for Paul Wittgenstein, an Austrian pianist who had lost his right hand in the war. The piano part is for the left hand only, though it is written to give the impression that two hands are playing. We will hear an episode in the style of an improvisation which is then followed by a jazz section. Listen for the syncopation and bluesy jazz elements in this Concerto for the Left Hand.

**CONCERTO FOR THE LEFT HAND, Maurice Ravel

LESSON 6 - CHARLES IVES

Today we are going to hear music by American composer, Charles Ives. Ives lived from 1874 to 1954. All of his music was written before 1920, but most of it was undiscovered until the 1930's. Let's listen to his first piano sonata. I will tell you more about Ives as we go along. Here is the first movement of his Piano Sonata.

**PIANO SONATA NO. 1, FIRST MOVEMENT, Charles Ives

The sonata has been an important form of instrumental music from about the 1650's to the present. Usually it consists of four independent pieces called movements. Ives was an experimenter, and here, instead of the usual four movements, he composed five movements. Here is the second movement.

**PIANO SONATA NO. 1, SECOND MOVEMENT, Charles Ives

In that movement we could hear old tunes--like hymn tunes--running through the work. Some hymn tunes were quoted in the first movement, but perhaps they were less obvious to our ears. Somehow Ives' music sounds very American. Ives was the real thing--thoroughly American. He grew up in New England. The use of these old hymn tunes helps to make his music sound American. Let's hear a part of the third movement. Listen for the old hymn tune "What a Friend We Have In Jesus," and the tune variously known as "How Dry I Am," or "O Happy Days." This movement is somewhat slower than the others and is called "largo," which means slow.

**PIANO SONATA NO. 1, THIRD MOVEMENT, Charles Ives

Sonatas are written for the piano, called piano sonatas, or for a solo instrument, or for a solo instrument with piano accompaniment--violin sonatas, cello sonatas, harp sonatas, and so on. However, practically all the features of the sonata--the special form--are found in other instrumental music like the symphony, pieces for chamber music, like the string quartet, quintet, trio, and with some modifications, the concerto, a work for solo instrument and orchestra.

The fourth movement of Ives' Piano Sonata is a fast ragtime. Ragtime was the style of jazz popular in the first decades of this century--the time Ives wrote this work. So, we can see that Ives was influenced by jazz.

**PIANO SONATA NO. 1, FOURTH MOVEMENT, Charles Ives

And now the fifth movement. Notice the hymn tunes we heard earlier in this work.

**PIANO SONATA NO. 1, FIFTH MOVEMENT, Charles Ives

Ives attended Yale as a music student, but after graduation he went to New York and entered the insurance business and composed music as a hobby until the mid-20's while becoming a successful and wealthy businessman. He made little effort to have his works performed, but, eventually after being discovered in 1947, he was awarded a Pulitzer Prize for a symphony written twenty years previously. He never felt that his business career was a handicap to him as an artist. On the contrary, he felt that it was of positive value. He felt that art cannot be set off in a corner and hope to have vitality, reality, or substance. He felt that art should not be exclusive, but come out of the heart. Here is a part of Ives' Second Symphony.

**SYMPHONY NO. 2, FIRST MOVEMENT, Charles Ives

Ives was the son of a band master and music teacher in Connecticut. His father had an inquiring mind and an open ear. He encouraged his children to stretch their ears. Ives received music lessons starting at age five from his father, learning to play several instruments. He began to compose at an early age. By fifteen, the town performed a work of his. If we knew more about old hymn tunes, we could recognize them in his music. Listen for Stephen Foster tunes and "Camptown Races" in the last movement of this symphony.

**SYMPHONY NO. 2, FOURTH MOVEMENT, Charles Ives

Judging from the rather dissonant horns, we can see why Ives was viewed as revolutionary. In fact, this work was written in 1900, remaining undiscovered until the 1930's. Many of Ives' discoveries and innovations remain uncredited because his music was unknown at the time.

**SYMPHONY NO. 2, FOURTH MOVEMENT, Charles Ives

LESSON 7 - SYMPHONY AND ORCHESTRAL MUSIC

**SYMPHONY NO. 4, SECOND MOVEMENT, Bohuslav Martinu

That was a part of Symphony No. 4 by a Czechoslovakian composer, Bohuslav Martinu. We have all heard the term "symphony." Perhaps it is time to clear up what it means. "Symphony" is from the Greek word meaning sounding together. It is the most important form of orchestral music. The symphony originated about the middle of the eighteenth century, having its roots in several earlier forms. The present form of the symphony dates from the time of Haydn and Mozart, about 1790. Haydn wrote over one hundred symphonies.

A symphony generally has four movements, four different pieces, different tempos, moods--all in one work for orchestra. Sometimes orchestras are even referred to as symphonies--meaning a symphonic orchestra. Let's hear more of the first movement, this part a flowing fantasia.

**SYMPHONY NO. 4, FIRST MOVEMENT, Bohuslav Martinu

The second movement is somewhat more lively. Throughout his works, Martinu draws on the stylistic characteristics of Czech folk music. Sometimes the Czech influence is subtle, sometimes elusive. But, in using Czech folk music, Martinu's music has a nationalistic aspect. Always, however, it is very expressive. Here is the second movement.

**SYMPHONY NO. 4, SECOND MOVEMENT, Bohuslav Martinu

You can easily hear the contrast between the different movements of a symphony--that movement was much faster than the first. The third movement is largo, a term meaning slow. The melody is passed back and forth by various combinations of instruments.

**SYMPHONY NO. 4, THIRD MOVEMENT, Bohuslav Martinu

Martinu was born in the belfry of a church in Czechoslovakia where his father had the job of watchman. He showed an active interest in music, and at the age of six, started taking violin lessons from the local tailor. By the time he was sixteen, he entered the Prague Conservatory, and was expelled twice. Later he played with the Czech Philharmonic Orchestra. Since the war, Martinu has lived in the United States. Here is the fourth and final movement of his Fourth Symphony.

**SYMPHONY NO. 4, FOURTH MOVEMENT, Bohuslav Martinu

Now we shall hear a symphony by an American composer, Walter Piston, who is still living. Although Piston has disclaimed any pretensions whatever to nationalist American expression in his music, many feel that it is obvious on hearing his Third Symphony that only an American could have written it. Do you think his music sounds American? Let's hear the Scherzo movement of this symphony. The theme is played by violas and bassoons.

**SYMPHONY NO. 3, SCHERZO, Walter Piston

This symphony was first performed twenty years ago. Let's listen to the finale. The finale is a name for the last movement of a symphony.

**SYMPHONY NO. 3, FOURTH MOVEMENT, Walter Piston

Roger Sessions, like Piston, is one of our internationally-minded composers. The deliberate search for a nationalist music implies, for him, a limiting of the artist's freedom of choice. He feels that Americanism in music will come from within. He was born in 1896 and for a time was head of the music department at the University of California at Berkeley. His First Symphony was written in 1927 and is a sunny work. Let us hear the third and last movement of this work. The finale captures a dancelike feeling. Lighthearted rhythm is released into the pure joy of pattern making. Notice the energy and drive of this movement.

**SYMPHONY NO. 1, THIRD MOVEMENT, Roger Sessions

LESSON 8 - BELA BARTOK

Today we are going to hear music by Bela Bartok. The name Bartok has a strange melodious sound which characterizes many of the names of people who come from southeastern Europe: Hungary, Yugoslavia, Roumania, Czechoslovakia. The composer Bela Bartok is a Hungarian. Like the names of the people from these countries, his music is strangely melodious. Listen.

**ROUMANIAN POLKA, Bela Bartok

Perhaps some of you have sung folk music in your music classes. A folk song is a poem--perhaps about someone's life, or just good fun and nonsense--then someone makes up a tune for this poem that everyone can sing easily. Folk songs are usually of unknown authorship, and are handed down orally for many generations. This music we just heard is folk music. The strong rhythms make it easy to dance to--folk dancing. But what kind of folk dance? The title tells us: "Roumanian Polka." While we hear it once more, can you think of why a Hungarian, Bartok, came to write a Roumanian folk dance?

**ROUMANIAN POLKA, Bela Bartok

Bela Bartok was born in Hungary in 1881. Because the boundaries of countries of Europe--especially Eastern Europe--have been changing frequently due to many wars, the district of Hungary in which Bartok was born is now a part of Roumania, just as some of California was once a part of Mexico a long time ago. But the main reason Bartok composed Roumanian folk music is that he and Kodaly, also a Hungarian, spent many years collecting Roumanian, Hungarian, and folk music of other countries. It is said that history is in folk songs and that they are an inseparable part of a people, race, nationality or country. Some people feel jazz is folk music, others feel it is art music. It may be both--but certainly the blues, an important influence on jazz, is folk music--listen:

**SUNRISE, Memphis Slim

Most folk music, like that old blues, is not written down, but is passed from singer to singer. Folk music has no one composer, as contrasted to art songs which are composed by one professional composer. Folk music is music of, by, and for the people--the folk--the nonprofessional, the amateur. Here is another example of American folk music.

**IN THE EVENING, Josh White

Now let us return to Bartok and Hungarian folk music. Let's listen to another dance. Can you notice the bagpipe-like melody? This long sustained note in the bass is called a drone or pedal point. Sometimes it is repeated, but always it is on the same pitch.

**SWINEHERDS DANCE, Bela Bartok

A pedal point or a drone is a long held note, or a repeated note on the same pitch against changing harmonies and melodies in the upper parts. Pedal points create tension by sounding against chords and notes usually not played with it. Can you hear the contrasting notes against this low pedal point?

**SWINEHERDS DANCE, Bela Bartok

Now let's listen to an extended work by Bartok called Concerto for Orchestra, written in 1943. Toward the end of his tragic life, Bartok lived in utter poverty and poor health. In 1943 he was confined to a hospital. While there, he received a commission by the Boston Symphony for any piece he would write. This greatly encouraged Bartok, and the Concerto for Orchestra was the result. He died a year after its completion.

Do you remember what a concerto is? It is a work for solo instrument and orchestra. Bartok called this work a concerto because of his tendency in this composition to treat the single instruments in a "concertante" or "soloistic" manner.

Concertos were written to display the virtuosity of the performer. In this case, the element of virtuosity prevails, but the virtuoso is the entire orchestra. We can hear Bartok's highly personal use of folklore elements and his wonderful sense of sound in the first movement.

**CONCERTO FOR ORCHESTRA, FIRST MOVEMENT, Bela Bartok

In the second movement, see if you can notice the march-like quality. Also, the instruments appear in pairs. Listen for this in this movement.

**CONCERTO FOR ORCHESTRA, SECOND MOVEMENT, Bela Bartok

LESSON 9 - PIANO MUSIC

Today we are going to hear some music for the piano. The first selection is called "Ostinato," written by Hungarian composer, Bela Bartok. It is from a book of piano music called Mikrokosmos.

**MIKROKOSMOS, OSTINATO, Bela Bartok

As a concert pianist, Bartok was interested in composing piano pieces he could play in his concert recitals. But since he was a father and teacher, he wanted to write music that could be used in teaching his pupils the style of music he and other composers of the twentieth century wrote. Bartok's son Peter was the inspiration for this project. The result was six books of piano music called Mikrokosmos. This was instructional music, from the easiest to the most difficult. What do you think the world "Mikrokosmos" means? We can divide this big word into smaller words we recognize. "Micro" means small or little, and "cosmos" means world or worlds, so "Mikrokosmos" means "little worlds." This is an appropriate title, for each of the one hundred fifty three pieces averages a minute in playing time, and is a complete but very small world of music in itself. In each single mikrokosmos Bartok illustrated some musical point. Here he is illustrating and explaining in music the ostinato. But what is an ostinato? See if you can tell from hearing this piece.

**MIKROKOSMOS, OSTINATO, Bela Bartok

An ostinato, as you might have been able to discover, is a clearly defined phrase which is repeated, often at the same pitch. Here we heard repeated chords at the beginning:

**MIKROKOSMOS, OSTINATO, Bela Bartok

These chords were later played again at a different pitch level, and a new figure appears.

**MIKROKOSMOS, OSTINATO, Bela Bartok

This new figure is repeated at a different pitch level. So if you felt that ostinato meant repeated figure or melody, you were right. Let's listen again to the entire piece.

**MIKROKOSMOS, OSTINATO, Bela Bartok

Piano music has been popular since the instrument was invented three hundred fifty years ago. Maybe some of you play the piano, or have friends or brothers or sisters who do. The piano is a popular instrument since it can produce melody, a horizontal succession of notes--like the melody of a song; harmony, which is the sounding together of different notes--chords; and rhythm--the pulse of the music and the accents and syncopation. Melody, harmony, and rhythm can all be played by one person, allowing one person to become a one-man band or orchestra. Almost all the great composers since the invention of the piano have written works for the piano--including many of our twentieth century composers like Debussy, Ravel, and Bartok. Let's listen now to another of Bartok's Mikrokosmos. This one is called "Buzzing"--do you think Bartok effectively suggests this extra-musical sound?

**MIKROKOSMOS, BUZZING, Bela Bartok

The picturesque "buzzing" of that piece was quite a different sound from the sound the Impressionist composers obtained from the piano. Remember the soft, flowing music of Debussy?

**CLAIR DE LUNE, Claude Debussy

Yet another style of piano music is found in a work by American composer Paul Marshall. This work is called "Aneantissement." Is there any ostinato in this piece? That is, is there a clearly defined melodic phrase repeated over and over as we heard in the first Bartok piece today?

**ANEANTISSEMENT, Paul Marshall (used by permission of the composer)

which is repeated an octave higher:

**ANEANTISSEMENT, Paul Marshall (used by permission of the composer)

and then higher again:

**ANEANTISSEMENT, Paul Marshall (used by permission of the composer)

Because the tempo is slow, you might have missed this ostinato. Listen to this much again. This time we'll go on and hear the conclusion of the work.

**ANEANTISSEMENT, Paul Marshall (used by permission of the composer)

We can see from these different examples of compositions for the piano that the piano can produce a variety of sounds. One American composer named John Cage was not content to use the piano as such. So, he wrote compositions for pianos he had altered by adding balls, screws, nuts, bolts, rubber and wooden objects. Thus, he changed the pianos beforehand--before a performance. So, this music is called music for prepared pianos. Here is an example.

**AMORES, John Cage

That didn't sound like an ordinary piano, did it? Tone color or timbre is the special sound of each instrument that enables us to identify the instrument as a piano, a violin, a trumpet, or whatever the instrument is. Thus, by adding all these objects and changing the sound of the piano, Cage has really changed the tone color of the piano.

**AMORES, John Cage

For our ears, it may appear to be a long way from Bartok to Debussy to Cage. But, when we remember that twentieth century composers were and are constantly seeking new and fuller means of expression in music, it does not seem unusual that Cage would seek to change the instrument directly in order to obtain new sounds.

**AMORES, John Cage

LESSON 10 - THEME AND VARIATION FORM, PART 1

**WHEN JOHNNY COMES MARCHING HOME, Don Patterson Trio

We are going to discuss the variation form in music. More fully, this form is called the theme and variation form. A given melody, called a theme, is stated. Then a number of modifications occur--each of which is called a variation. So, a given piece in the theme and variation form will consist of statement of the theme followed by a number of arrangements, modifications, or variations of that theme. But, even though the theme is varied, each variation always has something in common with the theme. Otherwise, it would not be a variation of the theme. The variation deviates from the theme in some way. Otherwise it would not be a variation.

The theme and variation form is common in jazz, as in the example we just heard. In jazz, most of the music is improvised--that is, composed on the spot. Very little of it is written down. The jazz artist chooses a tune, plays it through once, and then proceeds to compose his own melodies as he goes along. For example, most of you are familiar with the tune we just heard: it is a folk song called "When Johnny Comes Marching Home." Listen.

**WHEN JOHNNY COMES MARCHING HOME, Karen Fanta

Since it would be monotonous to play that same tune over and over, the jazz artist will improvise and vary that original theme. He will make his own variations. A theme can be varied rhythmically, harmonically, or melodically. Yet all the variations will have something in common with the original tune. Listen to the statement of the theme, and then the variations in this tune as played by the Karen Fanta Trio.

**WHEN JOHNNY COMES MARCHING HOME, Karen Fanta Trio

Now let's hear the Don Patterson trio play this same folk song. The instruments are a tenor saxophone, drums, and organ. The bass notes are being played on the low pedals of the organ. First we will hear an introduction setting the tempo and mood of the piece. Then the theme, and then Mr. Patterson and his group will improvise variations on this theme. As in the earlier Fanta version, no two variations will be identical, because jazz is improvised--not written down on paper.

**WHEN JOHNNY COMES MARCHING HOME, Don Patterson Trio

Let's hear one more version of "When Johnny Comes Marching Home." Can you feel that these variations are different from the original theme, yet have something in common with it?

**WHEN JOHNNY COMES MARCHING HOME, Jimmy Smith Trio

Next, let's hear some piano variations by American composer Aaron Copland. These piano variations were written in 1930. The theme is ten measures long. Listen.

**PIANO VARIATIONS, Aaron Copland

This work conveys a feeling of strength and concentration--not a single note seems superfluous. Copland treats the piano percussively, like Bartok and many other twentieth century composers. Most of the variations are played loudly and not legato--not at all smooth--there are many sharp accents. This music sounds like the twentieth century. Following this basic theme there are twenty variations and a coda. Everything in the work is derived from the theme. Let's listen to the first three of these variations.

**PIANO VARIATIONS, Aaron Copland

These variations are clearly separated from one another by pauses and changes of tempo and meter, that is, three-four or waltz time, as opposed to four-four, and so on. The variations are also separated by register or range: sometimes the piano will be very high in pitch; other times it will be played in the middle range; sometimes quite low. Now let's hear the variations in their entirety. See if you can tell where one variation starts, another ends.

**PIANO VARIATIONS, Aaron Copland

LESSON 11 - THEME AND VARIATION, PART 2

Last time we talked about the theme and variation form. You remember that we said in this form of music, a theme is stated, and then it is varied: melodically, rhythmically, or harmonically. Listen to this jazz example of the theme and variation form. First the theme will be stated. Then it will be varied. The melodic variations will be the most obvious.

**WHEN JOHNNY COMES MARCHING HOME, Jimmy Smith Trio

Now let's hear some variations for solo guitar by American composer Joaquin Nin-Culmell. Nin-Culmell was born in Germany of Cuban-born parents. He is now a Professor of Music at the University of California at Berkeley, and still composes. These variations were written in 1945 in Cuba. There is a feeling for Spain in the work. Here is the main theme.

**VARIATIONS ON A THEME BY MILAN, Joaquin Nin-Culmell

This work is remarkable for Nin-Culmell's use of a variety of changes of color. Notice this and the technique needed to play this work.

**VARIATIONS ON A THEME BY MILAN, Joaquin Nin-Culmell

Next let's hear some variations by English composer Benjamin Britten. From his earliest childhood, Britten revealed phenomenal musical gifts. He began composing when he was five years old. Before he was nine, he had written a string quartet, and by the time he was sixteen, his works included a symphony. Britten is still living and composing in Great Britain. Let us listen to his Variations on a Theme of Frank Bridge For Orchestra, written in 1937. For many years, Britten was a pupil of Frank Bridge whom he greatly admired as both a composer and as a teacher. In 1937 Britten was inspired by a theme of Bridges' to write a series of variations. Following a brief introduction in which certain elements of the Bridge theme are only suggested, the theme proper is introduced and then repeated without ornamentation. Listen to just this much.

**VARIATIONS ON A THEME OF FRANK BRIDGE, Benjamin Britten

Now, let's hear this much again, and listen to the ten variations that follow. Can you hear where the different variations come? This work is for full orchestra in contrast to the solo guitar work or the jazz works for three instruments we heard earlier.

**VARIATIONS ON A THEME OF FRANK BRIDGE, Benjamin Britten

LESSON 12 - HINDEMITH

**MUSIC FOR SINGING AND PLAYING BY AMATEURS AND FRIENDS OF MUSIC, Paul Hindemith

That composition was by Paul Hindemith, a German composer, born in 1895. Hindemith became an American citizen in the 1950's, and died just in 1963. This type of music is called Gebrauchmusik, and it means "music for use." The term came into being in the 1920's, when a number of composers became aware of the fact that their audience of educated music lovers was small. Due to the increasing complexity of music, there existed a gulf between the composer and his audience. Consequently, these composers decided to compose what might be called practtical, workaday music--music designed for informal use by amateurs, as distinguished from music intended for concert performance by professionals. In fact, the work we just heard was called Music for Singing and Playing by Amateurs and Friends of Music.

Gebrauchmusik avoids technical difficulties so that it may be performed by amateurs. And, it is simple enough in form and content so that it may be readily understood and appreciated by a wide audience. This is not to say each piece lacked interest, for they did have interest. The term also refers to pieces composed for a specific occasion--dedication of a school, or a birthday celebration--"music for use." Hindemith was closely identified with this type of music. In an effort to supply amateurs with worthwhile music in the modern idiom, and to update the repertory, he wrote a sonata for every instrument. Can you identify the instrument here?

**SONATA FOR HARP, Paul Hindemith

That was music for the harp. The harp is a stringed instrument, but since it is plucked with the fingers, rather than played with a bow, it is considered to be a member of the percussion family. Gebrauchmusik composers did not keep aloof from the public. They felt a responsibility of composer to society in writing functional music. This could even involve writing music for radio, movies, television. American composers Virgil Thomson and Aaron Copland were also associated with this music for use, this practical, workaday music. Copland aimed at a simpler music. One popular piece by Copland that we heard earlier is El Salon Mexico--a musical picture of a Mexican dance hall based on Mexican tunes. It does not have the complicated texture than much of the twentieth century music we have listened to has.

** EL SALON MEXICO, Aaron Copland

Hindemith, we have said, was a prolific composer. But Hindemith did other things besides compose. If there was ever a complete musician, Paul Hindemith was surely that man. He was also a violinist, teacher, music theorist, scholar, and conductor--excelling in each rôle. Unlike composers such as Bartok, who died in poverty, no musician of any age enjoyed greater honor or influence than Hindemith did during his lifetime. Even more, perhaps, than the Gebrauchmusik we have heard by both Hindemith and Copland, Hindemith was thought of as belonging to the Neoclassic school of composers.

Neoclassicism was a movement of the twentieth century which was essentially a reaction against the subjectivity and unrestrained emotionalism of late Romanticism, the style period of music just before the 1900's. Now let's hear a work in Neoclassic style by Hindemith for the concert band.

**SYMPHONY IN B♭ FOR CONCERT BAND, Paul Hindemith

Our orchestral families of instruments are strings, brass, woodwinds, and percussion. In this work for concert band, no strings were playing.

What is neoclassicism? According to the dictionary, the prefix "neo" means new, or recent--especially a new and different form of a style or school. Thus, the term "neoclassic" means a new classicism; and it actually represents a turning back to the eighteenth century forms with the clarity, simplicity, directness of the music of this earlier period. Let's examine a neoclassic technique Hindemith used called "counterpoint."

"Counterpoint" is music consisting of two or more melodic lines sounding simulatenously. Another term is "polyphony," meaning the same thing--two or more independent melodies sounding at the same time. With Hindemith, counterpoint is not an end, but a starting point. Hindemith is not living in the past by using counterpoint in his works, but is using it as a method of composition--a technique. Can you hear the independent melodic lines in this work?

**SYMPHONY IN B♭ FOR CONCERT BAND, FUGUE, Paul Hindemith

Could you follow the independent melodies in that work? Let's contrast this with a jazz example of counterpoint.

**JITTERBUG WALTZ, Bobby Hackett Sextet

We could hear the note against note-the polyphony--in this example--although the rhythm and instrumentation was different. Here, the instruments we heard were the piano, string bass, drums, guitar--all in the rhythm section, and trumpeter Hackett, a clarinet, trombone. This is jazz rhythm with a swinging feeling. Listen again to the counterpoint. Notice that the trumpet will play the melody, then the clarinet and trombone will play other melodies, counterpoint, around the main trumpet melody.

**JITTERBUG WALTZ, Bobby Hackett Sextet

To return to neoclassicism, the classic influence in neoclassicism is apparent in the use of techniques such as counterpoint, and in the revival of old forms, such as fugues, motets, toccatas, theme and variations. Hindemith sought alliance with the past not out of nostalgia, but because he was convinced the music of earlier times contained eternal values.

This next example is a fugue. A fugue is a polyphonic composition based on a theme or subject which is stated in the beginning in one voice part. Then it is taken up and imitated by other voices in close succession, reappearing throughout the piece in various places as one voice or voices. Listen for the imitation and counterpoint in this fugue by Hindemith.

**SYMPHONY FOR CONCERT BAND, FUGUE, Paul Hindemith

To conclude, there is an orchestral work by Hindemith called Mathis der Mahler. All the elements of music--rhythm, melody, harmony, timbre and form, are made to conform to the neoclassic ideal of clarity, straight-forwardness and order. This is one of Hindemith's most popular and beautiful works.

**MATHIS DER MAHLER, FINALE, Paul Hindemith

LESSON 13 - PROGRAM MUSIC

Today we are going to talk more thoroughly about Program Music--music with a story, or program--music suggested by some non-musical ideas, like the Rite of Spring, or the Mother Goose Suite. The first work we are going to hear is by Paul Dukas, a French composer who died in 1935. We are going to listen to the Sorcerer's Apprentice, written in 1897, inspired by the Goethe poem, which in turn was a poetic adaption of an old folk tale. It is almost impossible to follow the story of this merry tale without recourse to a printed program. Perhaps some of you have seen this work as an animated Walt Disney cartoon, with Mickey Mouse as the apprentice, the helper or student of the sorcerer.

Here is the story--keep it in mind as we listen to this work in its entirety. A magician leaves his home in the charge of a lazy apprentice who, to save himself work, casts a spell over a magic broomstick, causing it to start drawing water from a nearby well and to fill up the various receptacles in the house. But, when these vessels are brimming over, the apprentice realizes that he has forgotten the magic formula for stopping the flow of activity, and the broomstick continues to bring in buckets of water, thus flooding the house. In despair, the youth seizes the broomstick and snaps it in two, but, to his horror, both parts of the broom now seize pails, and the carrying of water is resumed at twice its former rate. An uproar ensues--we can hear it in the music--the music gets faster and faster, suggesting the apprentice's panic and the brooms moving faster and faster. At the height of the commotion, the magician returns, order is restored, and a sadder but wiser apprentice is taught a lesson. Let's listen now to this fine example of program music. Imagine the story as you listen to the Sorcerer's Apprentice.

**THE SORCERER'S APPRENTICE, Paul Dukas

A world-wide known example of program music, the Sorcerer's Apprentice. The next example of Program Music is different. It is not so explicit. In fact, it is more picturesque than programmatic, suggesting certain moods. Written by Darius Milhaud, this composition is called A Frenchman In New York. This work is a suite. Do you remember what a suite is? In olden times, a suite was a series of dances, each in different rhythms and tempo, but, in modern times, like in Debussy's Children's Corner, a suite is just a series of different movements, not necessarily dances.

Let's listen to several of these movements. Here is the opening one. Remember Milhaud is a visitor to New York and these are his impressions. The first movement--foghorn brasses growl, and we get an impression of "Fog on the Hudson River of New York."

**FOG ON THE HUDSON RIVER OF NEW YORK, Darius Milhaud

Next, let's hear a movement called "Horse and Carriage in Central Park." This returns us to a more secular setting, and we can hear the clip-clop sounds of horses' hoofs.

**HORSE AND CARRIAGE IN CENTRAL PARK, Darius Milhaud

Let's now listen to a movement called "Times Square." This piece declares the composer's fascination with the pulsation of popular contemporary rhythms--the percussive beat of the century. Here is a musical picture of Times Square.

**TIMES SQUARE, Darius Milhaud

It is easy to imagine the hustle and bustle of this busy intersection of New York City as we listen to that work. Next, let's hear a work by American composer, Henry Gilbert. This work is a symphonic, or tone poem. A symphonic poem is a type of music in which a non-musical idea, like an idea from literature or history, serves as the basis of an orchestral composition. They symphonic poem is a type of program music, but usually is in just one movement. Program music may be divided into several movements.

Gilbert's "Dance in the Place Congo" was written in 1906. The music of the Creoles of Louisiana provided Gilbert with thematic subjects for this work. He uses five Creole songs, and we can hear frenetic slave dances which pass from nimbleness to outright savagery. A bell tolls funereal sounds to call the slaves back to their tasks, and the composition ends on a note of dispair. Let's listen to "Dance in the Place Congo." Notice the syncopated rhythms, stemming directly from the Negroes sense of rhythm.

**DANCE IN THE PLACE CONGO, Henry Gilbert

LESSON 14 - THE RITE OF SPRING

**RITE OF SPRING, Igor Stravinsky

That was the opening of the Rite of Spring, by Stravinsky. Stravinsky is one of the greatest musical figures in the twentieth century. Born in Russia, Stravinsky has lived in America since 1920. His compositions cover more than sixty years, and reflect different trends in modern art music. He is now in his 80's, and lives in California. From time to time he comes to the San Francisco Bay Area to conduct orchestras. The Rite of Spring was written early in his career, in 1913, over fifty years ago! What instrument do you think opens this work?

**RITE OF SPRING, Igor Stravinsky

The bassoon playing very high in pitch, is the instrument that begins the Rite of Spring. This was a hard question because the bassoon was playing so high and sounded almost like a flute, which is also a member of the woodwind family. We know that orchestral instruments are divided into families--strings, percussion, brass, and woodwinds. It is easier to tell one instrument from another if they belong to different families--such as a trumpet, which is a brass instrument, from a violin which is a string instrument. However, sometimes naming a specific instrument within a family is hard--and it takes practice. The different sounds of instruments, enabling us to tell a flute from a bassoon from a trumpet from a violin is called tone color, or timbre.

Let's familarize ourselves with this music by listening to it once more. What other instruments besides the bassoon do you hear?

**RITE OF SPRING, Igor Stravinsky

The instruments in this part of the work may be difficult for you to identify. The first instrument was a bassoon, then two French horns--which are brass instruments. Then a clarinet and bass clarinet and other woodwinds including the English horn, and then the strings--which in this example were plucked, or picked with the fingers giving a short, staccato sound. Did Stravinsky use all four families of instruments in this work? Let's listen some more.

**RITE OF SPRING, Igor Stravinsky

It is clear that Stravinsky used all four families of instruments in his work. We have heard the woodwinds, the strings--including violins, violas, cellos and string basses, the brass--including trumpets, trombones, and French horns, and you couldn't miss the percussion--drums, cymbals, kettledrums. When the Rite of Spring was first produced in Paris in 1913, over fifty years ago, it aroused such fury that the audience rioted! People booed and shouted out catcalls. Neighbors hit each other on the heads--then tomatos and things were tossed at the performers. Many people walked out. By the end of the concert, the police were called in. When people say, as they did when they first heard this work, "I don't know much about music, but I know what I like," they really mean "I like what I know." Sometimes we need to hear a work a couple of times to like it. So--let's listen to more of the Rite of Spring and try to get to know it.

**RITE OF SPRING, Igor Stravinsky

It is easy to see that this work is very different from the Impressionistic music, like the kind Debussy and Ravel wrote.

The Rite of Spring is an example of program music, music with a story, music suggested by a non-musical idea. Sometimes the title tells us what the music will be about, what the program will be. This is the case here. What is a rite? A rite is a ceremony. Primitive man used to have rites, Indians still do, and modern man also follows rites in some religious observances and social groups. The rite portrayed here is a rite of spring. Spring is worshipped, and this is portrayed by a series of dances to the worship of spring and the forces of Nature by primitive man. This is the program Stravinsky had in mind when he wrote the Rite of Spring. Perhaps some of you have seen the Walt Disney concert cartoon film "Fantasia" which has pictures of erupting volcanoes and fighting dinosaurs while the music plays on. This is program music too--though it is Mr. Disney's idea of the program, or story, for this piece. However, this is program music at its' best--this music we can enjoy without knowing the story or seeing dancers. Here are the concluding sections of the Rite of Spring.

**RITE OF SPRING, Igor Stravinsky

LESSON 15 - STRAVINSKY

Today we are going to hear music by Stravinsky. Like a colossus, Stravinsky has straddled the world of contemporary music for almost half a century. Stravinsky was born in Russia, and has lived in American since World War II. He is still living in California, and occasionally conducts concerts around the San Francisco Bay Area. Let's listen to Stravinsky's Concerto for Piano and Wind Orchestra, written in 1924. Can you identify the instruments in this work? Here is the first movement.

**CONCERTO FOR PIANO AND WIND ORCHESTRA, FIRST MOVEMENT, Igor Stravinsky

The solo instrument was the piano. The string bass and tympani could be heard in addition to the wind orchestra. The woodwinds included were the bassoon, flute, piccolo, oboe, English horn. The brass instruments were the trombone, trumpet, French horns. This unusual instrumentation is characteristic of Stravinsky's continual experiments with unusual combinations of instruments. The format follows neoclassical thinking-- Stravinsky's love for old forms, simplicity, order--but using modern harmonies. This concerto we just heard was a true concerto in the classical sense of the word: a composition for solo instrument (here the piano) and orchestra in three movements. Let's hear the last movement. The theme is treated fugually and there is imitation.

**CONCERTO FOR PIANO AND WIND ORCHESTRA, THIRD MOVEMENT, Igor Stravinsky

Another example of Stravinsky's neoclassicism is his violin concerto written in 1931. This is a piece for real virtuosity. Notice that the orchestra does not overshadow the solo instrument. This is a soloist's concerto, and great care is taken to display as many violinistic features and manners of performance as possible. Even in dynamics--the loudness and softness of musical sounds--the violin is dominant. Here is Stravinsky's Concerto for Violin.

**CONCERTO FOR VIOLIN, Igor Stravinsky

Now let's hear another work by Stravinsky for solo instrument and orchestra called a cappriccio. This Cappriccio for Piano and Orchestra was written in 1929. It is in three movements, but does not have the special form of a concerto. It is in a lighter vein--a fantasia--much freer and more rhapsodic than a concerto. Here is the Cappriccio for Piano and Orchestra.

**CAPPRICCIO FOR PIANO AND ORCHESTRA, Igor Stravinsky

Typical of Stravinsky's use of new combinations of instruments is our next work--music for solo viola. The viola is somewhat larger in size than the violin, and a little bit lower in pitch. You remember the rule, that as the size of the string instrument increases, the pitch becomes lower and more mellow. This piece is called Elegie. Elegie means a funeral, mournful type song.

**ELEGIE, Igor Stravinsky

Very sad, mournful music. It is amazing that that was just for one instrument. Now we shall change the pace and hear another example of Stravinsky's writing for unusual combinations of instruments. Here is Stravinsky's Octet. An octet is for eight instruments. Here the eight instruments are all wind instruments. This octet was written in 1923.

**OCTET FOR WIND INSTRUMENTS, Igor Stravinsky

Stravinsky composed in many different styles, and for many different combinations of instruments. The last example is the Circus Polka. This was part of a larger work, a ballet. A ballet is a theatrical performance of artistic dancing with costumes. Usually the ballet is accompanied by an orchestra. Here is the music to the Circus Polka. This particular excerpt is for a ballet of elephants!

**CIRCUS POLKA, Igor Stravinsky

LESSON 16 - ATONALITY

We are going to listen to music by Arnold Schoenberg, an Austrian composer. Here is a work called Transfigured Night, written in 1899 when Schoenberg was twenty-five years old. Can you identify the instruments in this work?

**TRANSFIGURED NIGHT, Arnold Schoenberg

What we heard was a string sextet: two violins, two violas, which are slightly lower in pitch; and two cellos, even lower and more mellow in tone than the violas. Remember that as the size of any string instrument increases, the tone becomes lower.

Schoenberg did not want to write like this all the time. This beautiful, rhapsodic type of music had pretty much reached its peak by 1900. So, what kind of music did Schoenberg write later in his life? Let's find out.

This next work was written in 1908--just nine years later. Can you hear any differences between this and the earlier work?

**THREE PIANO PIECES, Arnold Schoenberg

Well, the rhythm was not so new as it was in Stravinsky or Bartok, but clearly something different seems to be going on with the melody and the harmony. This is not the type of melody or harmony of the Star Spangled Banner, "Yankee Doodle," folk songs, or other songs we are used to hearing or singing. What makes it different? Well, the big change involved something called tonality. Tonality means the quality in music which presents one particular tone as the most important, the principal tone as the most important--the tonic, or Do. All the other tones are dependent on it. In our major and minor scales, one note is most important. This is Do. All the other notes somehow relate to Do, the starting note. Now, this music is atonal. This means that it doesn't have a key center, or homeplate. So we call it atonal. The prefix "a" means without, so atonal music is music without tonality. Listen--can you hear any note that seems most important?

**THREE PIANO PIECES, Arnold Schoenberg

No, no particular note seemed to stand out, so this music is clearly atonal. Atonal music is thus music in which a definite tonal center or key is purposely avoided. All the 12 tones are of equal importance. No Do is present which is most important. And, since our harmonies and melodies follow scales, and there is no scale here, the harmonies and melodies we hear sound different. Here is another work by Schoenberg called Pierrot Lunair--a collection of 21 poems set to music. The first selection is called "Moonstruck." Is this music atonal?

**MOONSTRUCK, Arnold Schoenberg

We've come a long way from the first piece by Schoenberg we heard. This music is different from other twentieth century music we've listened to--it was considered shocking even in 1912 when it was first performed. Like the earlier piano music, "Moonstruck" is also atonal.

The instruments we heard were the flute, piccolo--which are very high pitched woodwind instruments, the clarinet and bass clarinet--somewhat deeper in pitch than the regular clarinet, a violin, viola, and cello, and the piano. To fit in with the nature of the text, Schoenberg wrote for a female narrator and called the new technique sprechstimme--a special way of combining speech with song--the singer half speaks and half sings the words--the voice sort of aims at a note. Can you hear that this is in between speaking tone and singing?

**MOONSTRUCK, Arnold Schoenberg

About three years later, in 1915, Schoenberg began to feel that atonality needed a positive principle and a technique of its own. So, he invented the Twelve Tone Technique. In twelve tone music there was a rule that all twelve tones must be sounded before any of the notes could be heard for the second time. The reason there was a rule like this was to eliminate the possiblity of any one tone becoming more important than the others--becoming a tonic or Do. Octaves were not allowed either for the same reason. When an octave sounded, it made that note stand out and seem more important than the other notes.

Thus, the twelve tone system arranged the twelve notes into an order to make sure that no one note would be repeated before all the notes had been sounded. This was done before a composition was written. This meant that each composition, whether long or short, was based on a theme of twelve different notes. Here is an example of the twelve tone technique.

**LYRIC SUITE, Allan Berg

Thus, to write twelve-tone music, we must follow the rules. Twelve-tone music is an extension of atonal music: no one note would stand out; all seemed equal. One main difference between the twelve-tone row and tonality was that in tonal music, major and minor scales can be used over and over in lots of pieces and in different keys. We can start a scale on any note. But in twelve tone music, the tone row had to be invented anew for each piece instead of always being the same. The tone row is different for different pieces. This last example of twelve tone music is by one of Schoenberg's pupils, Berg.

**LYRIC SUITE, Allan Berg

LESSON 17 - PERCUSSION MUSIC

**CUBAN OVERTURE, George Gershwin

Today we are going to talk about rhythm in music, especially South American rhythms. That was a part of Gershwin's Cuban Overture written in 1934. It was Gershwin's last work. In it we could hear rhumba rhythms and South American instruments. Let's listen to a little more of it.

**CUBAN OVERTURE, George Gershwin

Now let's hear some entirely different music, also inspired by Cuba. This composition is by William Russell, and is called Three Cuban Pieces. First we will hear a habañera, second a rhumba, and last, a son. Can you hear any special instruments that sound Latin or South American? Any rhythms native to these areas?

**THREE CUBAN PIECES, William Russell

The instruments we heard were all percussion: a cencerro, which is a cow bell hit with a stick; guiro, a large dried gourd with notches on the side--a stick rasps across these lines and makes a raspy sound; maracas, rattles made of dried gourds filled with olive pits or something similar; bongo drums, a pair of small hand drums about eight inches in diameter--we heard two, and they are usually played in pairs, one slightly smaller than the other. Claves, a pair of hardwood sticks one of which strikes the other; the quijada, which is the jawbone of a mule--one hits the jawbone, and the teeth make a rattling, and the marimbula, a suitcase-sized wooden box with a sound hole in it and strips of metal across it--it comes from West Africa. Listen for these instruments and the special rhythms that we identify as Cuban and South American in this excerpt.

**THREE CUBAN PIECES, William Russell

This was percussion music. We can hear melodies, since there are different pitch levels on these instruments, but there is no harmony-no chords. Listen again.

**THREE CUBAN PIECES, William Russell

The fact that there was no harmony in this work differentiates it from the earlier Gershwin work we heard in which there was melody, harmony, and rhythm.

Next, let's hear music by Almado Roldan, who was one of the leading figures in Latin American music of the 1930's. He was a Cuban and originally a violinist. But, as he grew older, composition and conducting attracted Roldan more and more. All of his compositions employ Cuban folk motifs of one kind or another. The Ritmicas of 1930 are studies in the rhythms of Cuban folk dance. This is a work for a percussion orchestra. As in the earlier composition, we hear four sets of claves, a quijada, cencerro (the cow bell), the maracas, bongos, marimbula, and timbales--which are paired drums. Tympani and bass drum are also present--eleven players are required.

**RITMICAS, Almado Roldan

Carlos Chavez, born in 1899, is the leading figure in Mexico's musical life. He has used percussion instruments significantly in many of his orchestral works, but in 1942 he wrote a toccata for eleven types of percussion instruments--some of them Mexican, including Yaqui drums. Other percussion instruments include the tenor and side drums, bells, xylophone, cymbals, chimes, hardwood sound sticks, rattles, kettledrums or tympani, bass drum, and gongs. In this work, different groups of instruments are used in different movements. Which group of percussion instruments seems to predominate in the first movement?

**TOCCATA, FIRST MOVEMENT, Carlos Chavez

The high and low drums predominated in the first movement. The snare drum, with its short sound, and the tympani. Now let's hear the slower second movement.

**TOCCATA, SECOND MOVEMENT, Carlos Chavez

In this movement, Chavez uses the metallic instruments--the bells, cymbals, chimes, gongs, and the xylophone. We can notice that these two movements differed in timbre or tone color. Tone color is the special sound of an instrument that enables us to tell one instrument from another--a cello from a trumpet, castanets from the human voice. Chavez uses a great variety of tone colors in his compositions. Now let's listen to the last movement, which is taken at a lively tempo.

**TOCCATA, THIRD MOVEMENT, Carlos Chavez

The third movement included all the percussion instruments, but the rattles, hardwood sound sticks, and the small Indian drum predominated. The variety of dynamics, rhythm, tone color provided continual interest in this work. Only the glockenspiel or bells, and the xylophone, tympani, and chimes had a definite pitch.

In the classical orchestra of Mozart, Beethoven, and Haydn, only kettledrums were used. Gradually, percussion instruments have been added to the orchestra--through program music, the use of jazz, and by composers like Chavez using instruments native to their country.

Now let's hear a work by Milhaud, a French composer. This Concerto for Percussion and Small Orchestra was written in 1930. Do you remember what a concerto is? It is a work for orchestra and solo instrument. In this case, the solo instrument is the entire percussion family. The first section of this concerto creates a tonal image of violence and savagery--it is a vigorous movement. Let's hear this opening section.

**CONCERTO FOR PERCUSSION AND SMALL ORCHESTRA, Darius Milhaud

LESSON 18 - NEW SOUNDS

**STEPS, Archie Shepp Quintet

Today we are going to talk about new sounds in music. That example was avant garde jazz! Certainly a new sound for jazz. The sound sources of an age help establish the styles of music of a period. How have contemporary composers increased the spectrum of musical sounds in our age--the twentieth century? Modern composers have produced new sounds from our traditional instruments: the woodwinds, brass, strings and percussion, by using these instruments in new ways, as in the jazz example.

**UNIT STRUCTURE, Archie Shepp

Twentieth century composers and musicians have discovered and experimented with the potentialities of sound beyond the long accepted boundaries of music. Listen to how different this mainstream jazz example sounds--not a bit "far out."

**SUNDAY IN NEW YORK, Karen Fanta Trio

Now hear the new jazz, the ultra modern.

**UNIT STRUCTURE, Archie Shepp

Even in jazz, twentieth century composers and performers have used the traditional instruments in new and exciting ways. In addition to the regular instruments, lots of new instruments, particularly in the percussion family, have been introduced into twentieth century orchestras. Listen for tambourines, maracas, and castanets in this work.

**TWO RITMACAS, Almado Roldan

Contemporary composers have also produced new sounds by evolving new tonal systems. Remember our discussion of atonal music, music without a Do or tonal center? One special tone system replacing scales for some composers, was the twelve tone technique. Listen:

**LYRIC SUITE, Allan Berg

Schoenberg, who invented the twelve tone system, even used a special half singing-half speaking technique to get a new sound in some of his works. This was called Spretchstimme or speech song.

**MOONSTRUCK, Arnold Schoenberg

Another special sound with the voice occurred in an example of symphonic jazz. Remember the chanting of a chorus during the Nero Nerak of Marshall?

**NERO NERAK, Paul Marshall (used by permission of the composer)

Other works we have listened to have called for new and unusual sounds: bird calls,

**PINES OF ROME, Ottorino Respighi

taxi horns.

**AN AMERICAN IN PARIS, George Gershwin

Each age has men who are rebels--who break down the traditional rules, customs, and procedures in art to open up new horizons. If this were not the case, our music of today would be confined to that written long ago.

John Cage is such an experimenter. You remember his works for prepared pianos--listen:

**AMORES, John Cage

The alterations--the adding of nuts, bolts, screws between the keys of the piano--completely alters the sound of the piano, and affects the tone color of the instrument. This new music is mostly a music of timbres and rhythms. By altering and preparing the piano, a whole new range of tone color is provided.

**AMORES, John Cage

Electronics has greatly expanded and extended the sound resources available to composers, and has provided new means to organize these sounds into music. The tape recorder, microphone, and computer have become as familiar in the world of music as the amplified instruments of rock and roll. The principal instrument of the new breed of composers is the magnetic tape recorder. Before we talk more about this music, let's listen to a composition of electronic music.

**FANTASY IN SPACE, Otto Luening

Since the perfection of the tape recorder, a whole new field of musical compostion has opened up. The electronic composers use as sound sources conventional instruments, pre-recorded noise, or electronic sounds from various types of sound generators. Then they do all sorts of marvelous things to the sounds by means of tape recorders, and ultimately end up with a composition on tape--like the example we just heard. Here is a last example of this electronic music.

**POEME ELECTRONIQUE, Edgar Varese

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APPENDIX B

The Control Listening Curriculum

The Control Listening Curriculum

For the control listening curriculum, this research was fortunate in having available nine taped recordings of the Young People's Concerts by Leonard Bernstein and the New York Philharmonic Orchestra. Here are short descriptions from the nine Bernstein tapes that were used in this experiment. Each tape has a running time of approximately one hour. One tape, given in two half-hour segments on alternate days, was presented each week for nine weeks. Since the purpose of the control listening curriculum was to control content within the medium of tape recorded lessons, a special effort was made to select tapes having few, if any, twentieth century compositions.

Tape No. 1: What Does Classical Music Mean?

By illustrating the interpretive possibilities of "I Can't Give You Anything But Love, Baby," Bernstein plants the concept of classical as exact music in his listeners' minds. The spirit of the classical period is demonstrated by analyzing the precise construction of the opening fugue of Bach's Fourth Brandenburg Concerto. The tape closes with a performance of the Egmont Overture as an illustration of Beethoven as a classicist who served as a bridge between the Classic and Romantic periods in music.

Tape No. 2: Romanticism In Music.

Romantic composers considered four musical freedoms as articles of faith: freedom of tonality, freedom of rhythm, freedom of form, and freedom of musical color or sonority. Musical illustrations of these freedoms included Berlioz' Romeo and Juliet, Faust Symphony by Liszt, Wagner's Die Meistersinger, and Richard Strauss's Don Juan.

Tape No. 3: Variety In Music.

Although Western music consists of twelve possible notes in any one register, Bernstein confines his study of the infinite variety of the creative human spirit to four notes: C, F, G, A, of the tune known as "How Dry I Am." To see the abundance of musical meanings those notes can have, examples from Smetana's The Moldau, Handel's Water Music, Schubert's cello sonata The Arpegioni, Beethoven's Sixth Symphony, Brahms' First Piano Concerto, Richard Strauss's tone poem Death and Transfiguration and Til Eulenspiegel, and other examples and excerpts from Copland, Mendelssohn, Wagner, Brahms and Strauss.

Tape No. 4: What Is a Melody?

Melody is the heart and soul of music. Students are taught to recognize that melody can be a tune, a theme, a motive, a long melodic line, a bass line, or a counterpoint of many tunes. Where there is music, there has to be a melody. Musical examples for this tape were drawn from Brahm's Fourth Symphony, Wagner's Prelude to Tristan und Isolde, and from Beethoven's Fifth Symphony.

Tape No. 5: Bach.

The great beauties of Bach's music lie beneath the surface. Bach's music is truly dramatic, using contrast of ideas, sonority, counterpoint and harmony interacting together. The lesson concludes with an excerpt from the St. Matthew's Passion.

Tape No. 6: What Makes Music Symphonic?

To be symphonic, music must change, develop and grow. These changes are represented by variation, as illustrated in Beethoven's Third Symphony, through the use of sequential development as illustrated in Tchaikovsky's Romeo and Juliet, by imitating development, augmentation, diminution, dynamics, and mode changes. The last movement of Brahms's Second Symphony is used to illustrate symphonic development.

Tape No. 7: What are Intervals?

A single note by itself is meaningless. But once one has two notes, one feels a relationship and has the beginning of a musical meaning. Music is not made out of notes themselves, but out of intervals between one note and another. A detailed discussion of the use of intervals in Brahms's Fourth Symphony concludes this lesson.

Tape No. 8: What Is Sonata Form?

Bernstein analyzes the tune "Twinkle, Twinkle, Little Star," and Micaela's aria from Carmen. From this, the students are led to recognize the expanded A-B-A form found in a sonata. In this tape, Mozart's C Major Piano Sonata was analyzed to show the key relationships of the themes and the use of tonic and dominant keys to attain balance and contrast. Mozart's Jupiter Symphony ends this lesson, identifying the exposition, development, and recapitulation.

Tape No. 9: What Is a Concerto?

In its early form, the concerto was based on the principle of imitation between solo, or group of soloists, and accompanying body. From its Baroque Italian origin, the development of the concerto was modified to the form of the virtuoso concerto resembling the symphony--a trend that encouraged virtuosity by the solo performer. Vivaldi's Concerto in C Major and the last movement of Bach's Fifth Brandenburg Concerto were played as examples of the Concerto Grosso. The Mendelssohn Violin Concerto exemplified the solo performance concerto. Bartok's Concerto for Orchestra illustrated further evolution that modern composers have used.

APPRENDIX C

The Kyme Test of Aesthetic Judgments in Music

The Kyme Test of Aesthetic Judgments in Music

Tape Transcription

This is a test to discover what you hear in music which causes you to enjoy it. You will hear two short pieces which are very much alike. While you are listening, you are to decide which one of them you like better. Sometimes the two pieces are exactly alike except for the rhythm. Sometimes it is the harmony that is different; sometimes it is the melody; and sometimes it is the way the music is played that is different.

You are to listen carefully and mark on your paper which of the two performances you prefer: A or B. If the two pieces are exactly alike, or if you cannot tell which is the better, do not guess but put a mark in the third column under C.

Let us listen to the first pieces together. Find the number one on your answer sheet. Listen carefully.

1A
1B

Do you agree that the first performance is the better? Most people do, so put a mark through the A opposite 1.

Now listen to the next example:

2A
2B

Here the better performance is the second, so you should make a mark through B opposite 2.

Now listen to number 3:

3A
3B

Did you prefer A or B? The answer is C, for the two performances were exactly alike, so put a mark through C opposite 3.

Remember: do not guess. If the two pieces are exactly alike or if you cannot tell which is the better, put a mark under C.

Now, if you understand how to mark your paper, we shall go on with the test.

Items Used for Illustration

1. Schumann: Kinderscenen, Op. 15, No. 2. Rhythm; A.
   This is an obvious rhythmic distortion; the notes of the original melody were kept, but we employed an entirely different rhythm to accompany it. We began with a triplet figure, while the original used a quarter note. Also we used fewer dotted rhythms. In general, our purpose in the distortion was to remove the emphasis from the places where it properly belonged. In the second measure we interpolated a waltz accompaniment.

2. Schumann: Kinderscenen, Op. 15, No. 13. Harmony; B.
   Harsh dissonance employed at random, without any regard for the rules of chord structure, is employed in this harmonic change. Notes are used which have no relation to the chord into which they are inserted. In addition, we break a rule of harmony by using a stationary bass over the measure line.

3. Bach: My Heart Ever Faithful, from the Pentecost Cantata. Melody; C.
   In the spoiled version of this simple melody, irrelevant melody notes are inserted which are foreign to the existing chord structure; for example, we use "g sharp" in the melody over a simple C major triad. In addition we make the melody more dull by the use of several repeated notes.

Items in the Test and Key for Scoring

1. Haydn: Sonatina. Melody; A.
   In this composition the melody has been distorted in the first, third, fifth, sixth and seventh measures. The changes are obvious, inasmuch as they are contrary to the harmonic implications in the bass. In the next to the last measure we have two major seventh skips which are particularly unmelodic, and in the fifth measure we have an "e flat" melody note against a predominating C major harmony.

2. Schumann: Scherzino, Op. 26, No. 3. Rhythm; A.
   The change here is in the rhythm. The theme of the original is lively, and the rhythm very decided. In the mutilation, the dotted rhythm is removed, except in the last measure where its presence is incongruous, and a lifeless and awkward rhythm is substituted.

3. Liadoff: Prelude in C Major, Op. 40, No. 1. Harmony; B.
   The harmony in the bass of this composition is modified by replacing the existing chord structure with harsh dissonances out of character with the subdued, soporific suggestiveness of the original; substituting "a flat" and "f sharp" for a C major triad is an example of the type of change.

4. Dreyshock: Gavotte. Melody; A.
   One of the obvious features of change in this modification is the distance which the melody skips in going from one note to another.

We distort the melodic line so that it climbs up to high "d sharp" while the next note descends an octave and a fifth to "g." Following this are two measures of tedious repetition and then again suddenly the melody skips a ninth. This type of change prevails throughout the composition.

5. Moussorgsky: Hopak, arranged for piano by Sergei Rachmaninoff. Form; B. (R or M)

When one expects in this modification a return to the original theme, he gets instead an uninteresting two note figure repeated four times. In the last measure where the original has three notes, repetitions of a previous figure, the mutilation ignores this repetition and closes with one note.

6. Haydn: Andante Grazioso. Harmony; A.

The mutilation is in this case relatively unimportant until the next to the last measure. Previous to this, there is a slight harmonic change in the second measure, and in the fifth, a melodic change from "e flat" to "e sharp." However, in the seventh measure, we make two startling digressions from the original: first we change a "d" minor root position chord to an "f" major 6/4 chord; second, we substitute for a tonic 6/4, a dominant chord of "f." These substitutions, although not far removed from the rest of the composition in key relationship, seem unwarranted because they are not inserted in places where they sound well in relation to the preceding and following chords.

7. Gluck: Caprice. Melody; B.

We distort the melody in the spoiled version of this simple theme in three ways: first, by reducing its range; second, by introducing monotonous repetitions; and third, by using melody tones foreign to the basic harmony.

8. Marpurg: La Voltigeuse. Rhythm; A.

We take the joyousness, the sprightliness, out of this composition by changing the rhythm. The original is in 2/4 tempo, with many sixteenth notes which are all to be lightly or quickly played. We substitute eighth and quarter notes for these sixteenth notes, in this way dragging out the piece until the virility of the original is entirely gone.

9. Rameau: Rigaudon. Harmony; B.

This Rigaudon has some irrelevant harmony in the modification. It is glaringly discordant and particularly so when inserted into this simple piece of Rameau's; the use of "b flat" in the bass against "b" in the treble is an example of the type of change.

10. Martini: Gavotte. Form; B. (R or M)

In this Gavotte the first four measures of the spoiled version remain exactly as Martini wrote them. The following four of the original have a return comparable to the beginning of the piece, but in the mutilation have nothing but arpeggios.

11. Napravnik: Russian Dance. Rhythm; B.

The dynamic stirring quality of the Russian dance is completely eradicated in the modification of this composition. The rhythmic changes include the interpolation of a waltz rhythm and the addition of successions of triplets, sixteenth notes, and dotted rhythms, all of which are not contained in the original. The first part of the piece is spoiled by giving equal length to notes of unequal value, thereby removing any of the points of emphasis.

12. Beethoven: Sonata, Op. 2, No. 1. Form; A. (M)

This theme of two measures makes a vigorous ascent to the note "a flat." Immediately following is a repetition over dominant harmony, culminating in the note "b flat." For this latter progression we substitute a downward melodic line, obviously out of place in relation to the original theme. Furthermore, Beethoven in the sixth measure repeats part of the theme, but we abandon this altogether and instead use in the treble just one note, a high "e flat."

13. Chopin: Mazurka, Op. 24, No. 3. Melody; B.

In this mutilation we keep the melody as far as the sixth measure within a range of five notes as compared with nine of the original. In addition, the closing two measures of the correct version include a spread of seven notes while the spoiled item has only three. As a result, by comparison the spoiled version is dull because it keeps revolving around the same few notes, while the original progresses normally and consequently is more satisfying.

14. Schumann: Papillons, Op. 2, Finale. Rhythm; A.

This theme of Schumann's depends for its interst on its very decided 3/4 rhythm. The mutilation substitutes a combination of 3/4, 4/4, 6/4 which lacks any semblance of form or unity.

15. Dussek: Les Adieux. Form; A. (M)

We leave the first four original measures intact in the spoiled version of this item. In the following four we substitute an entirely different tune for the repetition which the correct version uses. These four measures have no melodic or rhythmic compatibility with the previous measures and seem entirely unwarranted.

16. Grieg: Gavotte, from the Suite Aus Halberg's Zeit. Harmony; B.

The dignity achieved through masterful harmonic progressions is ruined by the innovations which we insert into this spoiled version. We replace the smooth inner voice leading of the original by irrelevant notes which have no relation to the harmony of which they are made a part. Grieg achieves a climax by having the treble and bass progress by contrary motion to a given point; we keep the bass stationary, simplify the harmony, and as a result there is no climax. Furthermore in certain places we change the harmony in the bass to make it harshly discordant with the treble.

17. Scarlatti: Sicilano. Form; B. (H or M)

It is only in the third measure that we digress from the original in this item. Where Scarlatti repeats his theme in the bass, we use a disorganized melody which has a jarring, harsh sound both in itself and in combination with the treble.

18. Mozart: Sonata IV in B Flat Major. Melody; A.
This lovely melody of Mozart is spoiled through the insertion of notes which do not carry out the set of the previous structure. Mozart ascends to "g" in the second measure; we remain on "e flat." He repeats his theme at the beginning of the fourth measure; we substitute the melody note "b flat" for the original "f." In other words the normal expectation is distorted until the result becomes entirely lacking in form.

19. Raff: Rigaudon, Op. 204. Rhythm; B.
This composition digresses from the original rhythm in obvious ways. Two eighth notes become half notes in the spoiled version; in the same manner quarter notes change to eighths, regular rhythms become dotted, grace notes are eliminated, until scarcely a vestige of the sprightly original is left. The accompaniment is made unwieldy by inserting into the fast moving quarter notes of the original occasional triplets, which slow up the vigorous movement of the Rigaudon.

20. Grieg: Sarabande, from the Suite Aus Halberg's Zeit. Harmony; A.
The harmony in this item is modified through the insertion of unrelated dissonance. We insert chords at random which have no tonal relation with what precedes or follows. On the other hand in the sixth and seventh measures we have removed Grieg's interesting progressions so that these measures seem particularly incongruous in comparison with the earlier ones.

21. Scriabine: Prelude in B Major. Melody; A.
This spoiled melody is made to sound peculiar by making several of the notes clash with the established harmonic structure. The changes made are so pronounced that the melodic line played by itself sounds odd, unusual, as if the notes were chosen simply at random without any thought of a harmonic background for them.

22. Solovyeff: In the Fields. Rhythm; B.
The outstanding rhythmic characteristic of this composition which is in 6/8 time is a syncopation on the second and fifth beats of each measure. In the mutilation we remove this feature entirely. In the first place, we substitute for the 6/8 rhythm a combination of 3/4 and 4/4 time. We accompany this changed melody in varied ways: first, by simply using half notes, then by a waltz rhythm, again by triplets, and so on with similar variations throughout the whole piece.

23. Scott: Serenata, Op. 67, No. 2. Harmony; A.
We spoil the subtle harmonic procedure by using even more dissonance than the original, harsh sounds which are unorganized, which have no place in an ordered system. For example, we will use the "d flat" triad as basic harmony, and then in the melody will continue the original melodic fragment, "e," "f sharp," and "g sharp."

The result is a conglomeration which has no past association for us, and therefore seems strange and peculiar.

24. Bach: Partita in B Flat. Form; B. (R)
In this Partita, our only change is in the fifth and sixth measures in the bass. We introduce a triplet figure and keep repeating it, instead of using the normal quarter note progression in the original. These triplets seem out of place for two reason: in the first place, they are stupid melodically in themselves, and secondly, we use them in just these two measures. They occur nowhere else in the composition, and consequently have no unity in relation to the rest of the piece.

25. Mozart: Die Entfuhring, aus dem Serail. Melody; A.
This is a change in which the melody is made uninteresting by keeping it within a range of five notes instead of using the compass of an octave as does the original. For example, in the third measure the correct version ascends gradually to a high "g" while the spoiled version keeps repeating the notes "b" and "c." This obviously makes the tune dull and pointless. In the sixth and seventh measures, through similar repetition, this same effect is achieved again.

26. Bach: Gavotte, from the Sixth Suite for 'Cello. Form; B. (M)
In the modified version of this sprightly gavotte we leave the initial two measure theme as Bach wrote it. In the original version he repeats the theme with slight variants, but we diverge instead to an entirely extraneous musical idea which has no compatibility with the preceding measures. Throughout the composition we make these sudden digressions until the total result is simply a panoramic view of unrelated ideas.

27. Buchner: Cheerfulness, Op. 12, No. 1. Harmony; A.
In this composition the movable bass line provides a sympathetic background for the bright character of the original melody. It is the harmony of this bass which we mutilate by removing the unity and flow of its movement. The spoiled version repeats over and over again the same notes; it does not progress continuously to any given point, as in the original.

28. Chopin: Mazurka, Op. 7, No. 5. Rhythm; B.
This is one of the most obvious mutilations in the test. We remove all trace of the rhythmic variation in the original by having in the melody a continuous succession of 36 quarter notes. We use in the bass all sorts of unrelated accompaniments to support this tedious melody including a waltz rhythm, an eighth note single accompaniment, and then an eighth note chordal structure. We follow this variation by a return to the Mazurka character, and finally close with an arpeggio figure and some simple chords.

29. Beethoven: Sonata, Op. 27, No. 1. Form; B. (R or M)
This composition begins with an ascending arpeggio passage over the tonic C major chord; following this in the original is a

repetition, a fifth higher over the dominant triad. In the spoiled version we begin the repetition, but after a few notes abandon it and close with four dull notes, unrelated to the previous structure. The feeling of climax which the original gives is completely eliminated.

30. Beethoven: Allegretto, from Sonata, Op. 27, No. 2. Harmony; A.
Beethoven has here a bass line which is excellently constructed; it is interesting in itself and has a complete unity with the rest of the composition. We distort this bass both by unmelodic skips and by changing the harmonic implications; as an example of the former, in going from the fifth to the sixth measures, we progress from "a flat" to "d flat." In other ways we spoil the harmony: by consecutive fifths in the second and third measures, and by consecutive octaves in the sixth and seventh. In general, all our harmonic progressions are without distinction as compared with those of the original.

31. Auric: Song from Moulin Rouge. Harmony; A.
The song was played twice. In the second performance the harmony was altered putting the cadance into C minor instead of E♭ major.

32. Brahms: Symphony No. 1. Form; B.
The consequent phrase was played prior to the antecedent as a contrast to the original arrangement of the chorale theme from the fourth movement of this symphony.

33. Gershwin: Fascinatin' Rhythm. Harmony; B.
As a variant from the original, the harmony was changed in the sequential fourth, fifth, sixth and seventh measures.

34. Kyme: Minuet. Rhythm; A.
This minuet was played in good minuet style and then with misplaced accents which turned the gracefulness of the dance form into a monotonous 4/4 march.

35. Kern: All the Things You Are. Melody; B.
This beautiful song was marred in the mutilated performance by lowering the third melodic and harmonic sequence one-half step.

36. Dawes: Melody in A. Harmony; B.
A tonic harmony was substituted throughout for the colorful harmony originally employed in this composition.

37. Duke and Harburg: April in Portugal. Rhythm; A.
As compared to the first performance of this rhythmically interesting piece, the accompaniment of the altered version was one of confused rhythms.

38. Kyme: Ostinato. Harmony; B.
This piece with its constantly repeated bass pattern was performed so that the beauty due to the consistency of the ostinato was

sacrificed in the repeated version for another bass pattern that alternated between the melodic and pure forms of the minor scale.

39. Warren and Dubin: I Only Have Eyes for You. Melody; B.
In the inferior rendition of this song, the song modulates and returns shakily to the tonic without proper preparation.

40. Gershwin: Rhapsody in Blue. Rhythm; A.
In the theme from this composition, the chromatic rhythmical obbligato in the third through sixth measures was changed to a six-eight rhythm, thus emasculating this interesting figure.

41. Gross: Tenderly. Harmony; B.
The original harmony in this song was reduced to $I-II_7-V$ in the mutilated version.

42. Sweet: Fight On. Harmony; A.
This item comprised two performances of this college football song. In the second performance the bass notes were altered by flatting the seventh tone of the scale.

43. Whiting: Guilty. Melody; A.
In the least preferred version, an extra measure was interpolated at the fourth measure, which extended the sequence into the wrong key.

44. Styne and Cohn: I Believe. Form; A.
The repetitious first two measures of this song was extended another half measure thus carrying the repeated one note to a point of nausea. This mutilation was compared to the original edition.

45. Rose: Coca Cola. Harmony; B.
This theme song was played with two harmonies, the first of which the theoretician would most likely prefer.

46. Alter: Manhattan Serenade. Harmony; B.
As an inferior version, the melody was altered. The octave basso repetition of the third measure was played a major second lower than originally intended.

47. Gershwin: American in Paris. Rhythm; A.
The melody was played legato and its rhythm altered in the inferior performance of this item.

48. Hagen: Harlem Nocturne. Melody; B.
Major thirds were substituted for the expected minor thirds in the melody of this piece, thus presenting a problem of consistency of mode between the melody and its harmony.

49. Schumann: Little March. Rhythm; B.
In the mutilated version the accent is changed so that the music appears to start with an anacrusis.

50. Schumann: Happy Farmer. Rhythm; A. (Tempo)
The piece is played normally at 96 beats per minute, but the mutilated version was played at 136 beats per minute.

51. Hindemith: Piano Sonata No. 2, First Movement, last page. Harmony; A.
In the mutilation, rhythms are left as is, but Hindemith's atonal harmonies with their quick color shifts are replaced by an innocuous version which sticks closely to the diatonic harmonies of C minor and E-flat major.

52. Milhaud: Saudades do Brazil, No. 7: "Corcovado," opening. Harmony; B.
In the mutilation, the tango (habañera) rhythm has been left intact, but the melody, in D major, has been harmonized in that key throughout, instead of in G major, as Milhaud wrote it. At the place where Milhaud shifts to A-flat major (with appropriate bi-chordal harmonies above), a version sticking to D major is provided. The purpose of the mutilation is to substitute straight diatonic harmonies for the bi-chordal and bi-tonal original.

53. Schoenberg: Six Little Piano Pieces, Op. 19, No. 4 (entire). Melody; B.
The mutilation retains the rhythmic scheme in general, but uses diatonic F major instead of Schoenberg's atonal procedures. This example stands midway between Schoenberg's early romanticism and his later 12-tone style.

54. Joplin: Maple Leaf Rag, second section. Rhythm; A.
The mutilation retains the left-hand two-step alternating bass, but all syncopations and cycles-of-3 are removed from the right hand, substituting square, on-the-beat melody notes with straight quarters and eighths.

55. Griffes: The White Peacock (from "Roman Sketches"), opening. Harmony; B.
Again, the mutilation retains the rhythmics and general melodic contour of the original, but innocent basic chords in F major are substituted for Griffes' rich ninths, augmented elevenths, and chromatic melody.

56. Bartok: Bulgarian Rhythm No. 1 (No. 113 in Vol. IV of the "Mikrokosmos"), entire (without the repeat). Rhythm; A.
The mutilation does several things: in the first place it substitutes regular 4/4 time for Bartok's 7/8 (a routine signature for Bulgarian, Yugoslavian, and Greek folk music). Next, Bartok's eccentric 5-measure phrases are replaced by balanced 4-measure phrases. The continuous ostinato of Bartok's left hand (which lacks chordal feeling in its bagpipe drone fifth) is replaced by shifting simple common chords in D minor, while Bartok's wildly chromatic and atonal melody is replaced by a routine, dull conjunct D minor tune, harmonized in trite thirds and sixths like 19th century cafe gypsy style. Bartok's introduction and coda (each an odd 3 measures featuring the dissonant interval of a major second) are replaced by a symmetrical 2 measures relying on a consonant full minor triad.

57. Casella: Eleven Children's Pieces, No. 6 ("Siciliana"), opening. Melody; A.

Casella makes consistent use of the Dorian mode in both melody and harmony; the mutilation changes this in both respects to plain D minor, harmonic form. The mutilation also avoids the dotted rhythm in the melody (characteristic of the siciliana; other niceties are omitted, such as the grace notes in measures 6 and 8, and the slight melodic variation in measure 8 as compared with measure 6). The colorful Neapolitan 6/4 in measures 10 and 12 is replaced by an ordinary dominant, and the cadence is plain D minor, instead of Casella's Picardy third.

58. Casella: Eleven Children's Pieces, No. 8 ("Minuetto"), opening. Melody; B.

Casella's melody and harmony are both extremely modal; the intervals featured in the chords are 2nds, 4ths, 7ths, and 9ths, plus superimposed 4ths and 5ths; the major 7th is particularly favored. All this gives a cool, non-tonal feeling to the whole. The mutilation interprets the entire melody in straight C major, with primary triads, substituting a tonal impression for a modal.

59. Grieg: Bell Ringing, Op. 54, No. 6 ("Lyric Pieces, Book V"), opening. Melody; A.

This is perhaps Grieg's most unusual piece, and is frankly impressionistic in the new manner of his day. The blurred ostinato of open 5ths in the bass, plus the superimposed sandwiched sets of three 5ths in the treble (all moving in continuous consecutive 5ths), constitute a piece no one would dream was Grieg unless he actually knew the composition. Each piled up 2-measure group contains at least 5 (and sometimes 6 or 7) pitches, so that 9ths, 11ths, and various cluster chords predominate. The mutilation is in a clear C major, with primary triads, and a simple modulation to G. It removes the ostinato and pedal point technique of the original, uses pure triads and dominant 7ths, and substitutes a sweet and insipid choral melody for the original blurs of color.

60. Shostakovich: Three Fantastic Dances, Op. 1, No. 1, opening. Melody; B.

The mutilation removes the dotted character of the original in favor of a smooth 8th and triplet movement; in place of Shostakovich's far-ranging and swiftly moving right-hand part in the 3rd and 7th measures, a gentle, narrow, and sweetly chordal melody is substituted. In the original, the harmony begins darkly on the dissonant half-diminished chord on the tonic and shifts to a major 11th with flatted 9th on the subdominant, not to mention the Neopolitan major seventh in the 3rd bar which moves to a dominant augmented triad. The mutilation uses conventional, non-dissonant harmony in C major.

61. Debussy: Preludes, Book I (No. 2, "Voiles"), 3rd page. Harmony; B.

This excerpt involves a whole-tone passage based on the pitch C followed by a switch to black-key pentatonic. The mutilation begins by altering F-sharp and A-flat to F and A, then interpreting the melody in B-flat major (with tonic and dominant harmonies). At the pentatonic entrance, in the mutilation, the B-flat triad becomes B-flat dominant 7th chord, and the arpeggios (formerly on black keys) are done on that chord. The cool, floating, suspended quality of the original harmonies is thus completely canceled.

62. Gershwin: Preludes for Piano, No. 2 (opening). Melody; B.
This is a blues; the mutilation avoids all chromaticism and invents a simple tune in C-sharp major, with no blues 7th; the bass ostinato is replaced by shifting primary triads in root position, with no chromatic moving tenor part. The climax of the melody is avoided, and the contrary motion dissonant tenor parts at the cadence are replaced by a barbershop chromatic slide in 6ths.

63. Cowell: Amerind Suite, No. 1 ("The Power of the Snake"), Variation 1-c. Melody; A.
This is an American Indian interpretation, with cluster chords throughout. The mutilation invents a simple new melody, so that it can be done in a straightforward D minor throughout (harmonic form), using essentially only tonic and dominant. The mutilation avoids Cowell's ingenious inversion in the 6th bar as compared to the 2nd. The power and punch of the original are missing in the clear harmonies of the mutilation.

64. Poulenc: Impromptu, No. 3 (from "Six Impromptus"), opening. Harmony; A.
This is conceivably a deadpan spoof of a schottische, in Poulenc's famous "wrong note" style. Part of the spoof is in Poulenc's 3/4 time signature (like Schumann's 3/4 "March of David's Men Against the Philistines"--last movement of the "Carnaval" suite). The mutilation is a little proper schottische in 4/4 time--and no chromatic or dissonant counterpoint, or two keys at once (G and F-sharp) as in measures 7 to 11 of the original. Harmony in the mutilation is extremely diatonic.

65. Ravel: Sonatine, Movement No. 1, Secondary Theme of exposition. Harmony; B.
The mutilation treats Ravel's exact theme with two chords only; tonic and dominant in E major; whereas Ravel's harmonization is parallel shifting major triads, with no particular key, and a strong modal touch. Needless to say, consecutive 5ths are featured in both right and left hand.

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